

# Undergraduate Bulletin



1995-96

THE UNIVERSITY OF AKRON



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## Calendar 1995-96

### Fall Semester 1995

Day and Evening Classes Begin	Monday, Aug. 28
*Labor Day(Day and Evening)	Monday, Sept. 4
Veterans Day (Classes held; staff holiday)	Fri., Nov. 10
**Thanksgiving Break	Thurs.-Sat., Nov. 23-25
Classes Resume	Mon., Nov. 27
Final Instructional Day	Sat., Dec. 9
Final Examination Period	Mon.-Sat., Dec. 11-16
Commencement	Sat., Dec. 16
Spring Intersession	Tues.-Sat., Jan. 2-13, 1996

### Spring Semester 1996

*Martin Luther King Day	Mon., Jan. 15
Day and Evening Classes Begin	Tues., Jan. 16
*Presidents' Day	Tues., Feb. 20
Spring Break	Mon.-Sat., March 18-23
***May Day	Fri., May 3
Final Instructional Day	Sat., May 4
Final Examination Period	Mon.-Sat., May 6-11
Commencement	Sat., May 11
Summer Intersession	Mon.-Fri., May 13-June 7
Commencement for Law School	Sat., May 18

### Summer Session I 1996

First 5- and 8-Week Session Begins	Mon., June 10
*Independence Day	Thurs., July 4
First 5-Week Session Ends	Fri., July 12

### Summer Session II 1996

Second 5-Week Session Begins	Mon., July 15
8-Week Session Ends	Fri., Aug. 2
Second 5-Week Session Ends	Fri., Aug. 16
Summer Commencement	Aug. 17

### Fall Semester 1996

Day and Evening Classes Begin	Mon., Aug. 26
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- \* Classes Canceled
  - \*\* Classes canceled from Wednesday at 5 p.m. until Monday at 7 a.m.
  - \*\*\* Classes canceled from noon to 5 p.m.

### University Closing Policy

The president, or designee, upon the recommendation of the associate vice president for the Division of Administrative Support Services will determine when conditions – such as severe weather or a state of emergency – necessitate closing the entire University or canceling classes at the main campus and/or Wayne College in Orrville.

The associate vice president for administrative support services-operations will promptly notify other designated University officials and members of the

Department of University Communications, who will contact area media. University colleges/departments are encouraged to establish a method for communicating the closing decision to department personnel. Closing information will be announced as early and as simply as possible to avoid confusion.

Cancellation of classes and closure announcements will be made as early as possible in the day and will clearly state the affected campus(es). Call 972-SNOW or 972-6238 (TDD/Voice) for updated information.

## Inquiries

Address inquiries concerning:

Admissions information, campus tours, housing, and transfer of credits to the Office of Admissions, The University of Akron, Akron, OH, 44325-2001. (216) 972-7100, or toll-free, (800) 655-4884.

Financial aid, scholarships, loans, and student employment to the Office of Student Financial Aid, The University of Akron, Akron, OH 44325-5201. (216) 972-7032.

Athletics to the Athletic Director, The University of Akron, Akron, OH, 44325-6211. (216) 972-7080.

Registration, scheduling, residency requirements, and veteran's affairs to the Office of the Registrar, The University of Akron, Akron, OH 44325-6211. (216) 972-8300.

Graduate study to the Graduate School, The University of Akron, Akron, OH 44325-2101. (216) 972-7663.

The University switchboard number is (216) 972-7111.

## Disclaimer

While every effort is made to provide accurate and up-to-date information, the University reserves the right to change, without notice, statements in the Bulletin series which include, but are not limited to rules, policies, procedures, fees, curricula, courses, programs, activities, services, schedules, course availability, or other matters. For example, programs may be modified due to limited resources or facilities, unavailability of faculty, insufficient enrollment, or other such reasons as the University deems necessary.

Please note that editions of this Undergraduate Bulletin prior to 1994-95 were entitled the "General Bulletin."

### THE UNIVERSITY OF AKRON IS AN EQUAL EDUCATION AND EMPLOYMENT INSTITUTION . . .

. . . operating under non-discrimination provisions of Titles VI, VII, of the Civil Rights Act of 1964 as amended and Title IX of the Educational Amendments of 1972 as amended, Executive Order 11246, Vocational Rehabilitation Act Section 504, Vietnam Era Veterans' Readjustment Act, and Americans with Disabilities Act of 1990 as related to admissions, treatment of students, and employment practices.

It is the policy of this institution that there shall be no discrimination against any individual at The University of Akron because of age, color, creed, disability, national origin, race, religion, veteran status, or sex. The University of Akron prohibits sexual harassment of any form in its programs and activities and prohibits discrimination on the basis of sexual and racial or ethnic orientation in employment and admissions.

Complaint of possible discrimination should be referred to:

Affirmative Action and Equal Employment Opportunity Officer  
Nell Miles  
277 Broadway Building, Room 212  
The University of Akron  
Akron, OH 44325-4709  
(216) 972-7300

Information on Title IX (sex discrimination) may be obtained from:

Nell Miles, Title IX Coordinator  
(216) 972-7300

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POSTMASTER:

Send address changes to *The University of Akron Undergraduate Bulletin*, Office of Admissions, The University of Akron, Akron, OH 44325-2001

## Important Phone Numbers

### University Area Code (216)

All phone numbers are subject to change without notice.  
For numbers not listed, call the University Switchboard (216) 972-7111

### Colleges

Buchtel College of Arts and Sciences .....	972-7880
Community and Technical College .....	972-7220
College of Business Administration .....	972-7040
College of Education .....	972-7681
College of Engineering .....	972-7816
College of Fine and Applied Arts .....	972-7564
College of Nursing .....	972-7551
College of Polymer Science and Polymer Engineering .....	972-7500
The University of Akron-Wayne College .....	1-800-221-8308
Northeastern Ohio Universities College of Medicine .....	325-2511
University College .....	972-7066

### Other Offices

Academic Achievement Programs .....	972-6804
Educational Talent Search .....	972-5771
N.Y.S.P. (National Youth Sports Program) .....	972-6804
S.T.E.P. (Stride Toward Excellence Program) .....	972-6819
Upward Bound Math and Science Programs .....	972-5105
Academic Advisement Center .....	972-7430
Adult Resource Center .....	972-7448
Admissions, Office of .....	972-7100 or 972-7077
Toll-Free .....	1-800-655-4884
Application Status Inquiries	
Freshmen .....	972-6420
Transfer .....	972-6418
Assistant Vice President and Dean of Students .....	972-5825
Associated Student Government .....	972-7002
Black Cultural Center .....	972-7030
<i>Buchtelite</i> , <i>The</i> (student newspaper) .....	972-7457
Center for Child Development .....	374-8761
Communication Centers (photocopying)	
Bierce Library .....	972-6278
Gardner Student Center .....	972-7870
Cooperative Education Programs .....	972-6722
Counseling, Testing, and Center	
Counseling .....	972-7082
Testing .....	972-7084
Coventry North, The University of Akron Center at .....	972-6266
Developmental Programs .....	972-7087
Math Lab .....	972-5214
Reading Lab and Study Skills Center .....	972-6551
Tutorial Programs .....	972-6552
Writing Lab .....	972-6548
English Language Institute .....	972-7544
Financial Aid, Office of Student .....	972-7032
Scholarships .....	972-7032
Work Study .....	972-8074

Fraternity and Sorority Life .....	972-7909
Gardner Student Center .....	972-7866
Graduate School .....	972-7663
Health Services, Student .....	972-7808
Honors Program .....	972-7966
International Programs .....	972-6349
Immigration .....	972-6349
International Admissions .....	972-6349
Intramural Sports .....	972-7132
Minority Affairs, Office of .....	972-7658
Minority Retention .....	972-7314
Libraries, University	
Bierce Library .....	972-7234
Law Library .....	972-7330
Science and Technology Library .....	972-7195
New Student Orientation .....	972-5347
Nursery Center .....	972-7760
Parking Services .....	972-7025
Peer Counseling Program .....	972-6769
Placement Services	
Cooperative Education .....	972-6722
Placement Services .....	972-7747
Student Employment .....	972-7405
Student Volunteer Program .....	972-6841
Registrar, Office of the University .....	972-8300
Graduation Office .....	972-7873
Records and Transcripts .....	972-8300
Residence Halls .....	972-7800
Sports Information, Director of .....	972-7468
Student Assistance Center .....	972-5755
C.A.R.E. Program (Chemical Abuse Resource Education) .....	972-5653
Services for Students with Disabilities .....	972-7928
TTY/TDD (hearing impaired) .....	972-5764
Student Development, Office of .....	972-7021
Study Abroad .....	972-6349
Ticketmaster .....	972-6684
Tours (of the University) .....	972-7077
Transfer and Articulation .....	972-7009
University Program Board .....	972-7014
Veterans Affairs Coordinator and Counselor .....	972-7838
Vice President for Student Affairs .....	972-7907
Work Study .....	972-8074
WZIP-FM Radio Station .....	972-7105

### Emergency Phone Numbers

Police/Fire/EMS .....	911
Police (non-emergency) .....	972-7123
Anonymous Crime Reports .....	972-TIPS (8477)
Campus Patrol .....	972-7263
University Switchboard .....	972-7111
Closing Information .....	972-SNOW (7669)



# 1

## About The University of Akron

JOHN R. BUCHTEL  
1820 — 1892  
FOUNDER  
BUCHTEL COLLEGE  
1870

# Background

## HISTORY

The connection between The University of Akron and its surrounding community has been a recurring theme from the institution's founding as a small denominational college in 1870 to its current standing as a major, urban, state-assisted university. It is significant that the efforts, energy, and financial support of an Akron manufacturer of farm equipment, John R. Buchtel, were instrumental in persuading the Ohio Universalist Convention to build its college on a hill overlooking the town that stretched along the Ohio Canal. The grateful trustees responded by naming the school Buchtel College. It is also significant that during its first four decades the struggling institution was repeatedly aided in its efforts to survive by various local entrepreneurs who pioneered and prospered in such industries as cereals, clay products, matches, and rubber. Buchtel College's emphasis on local rather than denominational interests became increasingly clear, and by 1913 those strong ties and the school's financial situation caused its trustees to transfer the institution and its assets to the city. For the next 50 years, the Municipal University of Akron received its principal support from city tax funds and swelled from an enrollment of 198 to nearly 10,000.

The growth of the college paralleled the remarkable expansion of the community itself. From 1910 to 1920 Akron was the fastest-growing city in the country, evolving from a thriving canal town of 70,000 to a major manufacturing center of 208,000, thanks in large part to a boom in local factories that bore names such as Goodyear, Firestone, Goodrich, and others. The age of the automobile—and the demand for inflatable rubber tires—changed the complexion of Akron forever.

Changes within the Municipal University's curriculum reflected the strong interrelationship of town and gown. In 1914 a College of Engineering began instruction, and other professional schools followed: Education (1921), Business Administration (1953), Law (1959), the Community and Technical College (1964), Fine and Applied Arts (1967), and Nursing (1967).

Considering the institution's location in the heart of a burgeoning rubber industry, it seemed only appropriate that the world's first courses in rubber chemistry would be offered at Buchtel College, in 1909. From those first classes in Professor Charles W. Knight's laboratory would evolve the world's first College of Polymer Science and Polymer Engineering (1988), now the largest academic polymer program in the world. In the 1930s and 1940s, with the establishment in Akron of the Guggenheim Airship Institute, UA scientists studied the structure and design of zeppelins. During World War II, University of Akron researchers helped fill a critical need in the U.S. war effort by contributing to the development of synthetic rubber. The University's polymer programs have produced some of the world's most able scientists and engineers, and today attract millions of dollars annually in research support, as well as top graduate students from around the world.

But research, innovation, and creativity actively take many forms at the University—in the sciences and in the arts and humanities. Today UA faculty study ways of matching workers with jobs to maximize performance; they develop new ways to synthesize fuel; they write and produce plays, pen poetry, choreograph dance works; they explore improved methods of tumor detection; they evaluate the quality of water in Northeast Ohio; they provide speech and hearing therapy to hundreds of clients; and they study political campaign financing and reform. UA's continuing and central commitment to the liberal arts is signified by the perpetuation of the institution's original name in the Buchtel College of Arts and Sciences.

And the University has maintained an openness to innovation in other ways. As early as the 1880s, Buchtel College was liberalizing its curriculum by allowing students to choose free electives within their courses of study. The University later adopted and developed the general education concept, which represents an attempt to prepare students for both their personal and their professional lives by providing a balance between courses that teach them how to make a living and courses that teach them about life as we know it in Western civilization. As early as 1914, nine University engineering students headed out into Akron factories, initiating one of the country's first engineering cooperative education programs. World War I-era students included the nation's first female students to co-op in a commercial job.

The University has a long tradition of serving the needs of part-time and full-time students through day and evening classes, and it attracts traditional-age students and adult "New Majority" students of all economic, social, and ethnic backgrounds. Committed to a diverse campus population, the University is at the forefront of all Ohio universities in recruiting and retaining minority students.

The University's first doctoral degree was, appropriately enough, awarded in polymer chemistry in 1959, but master's degrees were granted as early as 1882.

Doctoral work has now expanded to programs leading to the highest academic degree in 14 fields of study. In 1963 the receipt of state tax monies made UA a state-assisted municipal university, and on July 1, 1967, The University of Akron officially became a state university. Today, over 26,000 students from 43 states and 64 foreign countries are enrolled in its 10 degree-granting units. The University of Akron is among the 50 largest in the nation and boasts the third-largest principal campus enrollment of Ohio's state universities. The University offers a comprehensive academic package featuring select programs unsurpassed nationally and internationally. Alumni of the University number more than 92,000 and include scientists, engineers, artists, lawyers, educators, nurses, writers, business people, and other professionals at work in every state and 84 foreign countries.

The 170-acre main campus, with 76 buildings, is within walking distance of downtown Akron and is located in a metropolitan area of 2.8 million people. The University's presence in Northeast Ohio provides numerous opportunities in recreation, major collegiate, amateur, and professional sports, concerts, cultural events, and commerce, all within easy driving distance and many accessible via public transportation. Located on campus, the Ohio Ballet, Emily Davis Art Gallery, University Orchestra, Opera/Musical Theatre, concerts, recitals, choral programs, Touring Arts Program, University Theatre, Repertory Dance Company, and professional artists performing at E.J. Thomas Performing Arts Hall contribute to the University's rich cultural environment. The University has achieved a position of prominence in a number of intercollegiate sports. Having joined the Mid-American Conference in 1991, the University participates on the NCAA Division I level in 17 sports.

For more than a century the college on the hill has been an integral part of the city whose name it bears, an active participant in Akron's renaissance of commercial and artistic endeavor, a leader in the city's intellectual and professional advancement, a center for internationally lauded research efforts, a source of enrichment, education, and vitality both for itself and for its community. Our history is a long and proud one—but at The University of Akron our eyes are on the future, for our students, our faculty and staff, our community, and our world.

## MISSION STATEMENT

The University of Akron, a publicly assisted urban institution, strives to develop enlightened members of society. It offers comprehensive programs of instruction from associate through doctoral levels; pursues a vigorous agenda of research in the arts, sciences and professions; and provides service to the community. The University pursues excellence in undergraduate and graduate education, and distinction in selected areas of graduate instruction, inquiry, and creative activity.

## STRATEGIC DIRECTIONS

The following strategic directions provide further definition of the University's mission and serve as the bases upon which the colleges, departments, and service units of the University are establishing program objectives now and toward the 21st century.

### Strategic Direction I

Attract and retain a higher quality and more diverse student body.

### Strategic Direction II

Identify and eliminate barriers to a campus culture of service, and make every effort to improve the campus environment.

### Strategic Direction III

Increase student retention and progress toward completion of their academic program.

### Strategic Direction IV

Improve the quality of the undergraduate experience.

### Strategic Direction V

Cultivate scholarly and creative activities that are recognized regionally, nationally, and internationally.

### Strategic Direction VI

Acquire and efficiently utilize the human, informational, financial, and physical campus resources needed to fulfill the mission of The University of Akron.

## ACCREDITATION

Accreditation assures that degrees are recognized and approved by select regional and national education associations, societies, and councils. The University of Akron has been approved by the North Central Association of Colleges and Schools since 1914 and was recently reaccredited at the highest level as a comprehensive doctoral degree-granting institution. This recognition illustrates the high academic standards maintained at the University and assures students taking preprofessional courses leading to advanced study in such fields as medicine, dentistry, law, and theology that they are receiving sound preparation for acceptance at other graduate and professional schools. Accreditation also provides the security of knowing that the University will honor most credits earned at a similarly accredited college or university. Degrees earned at the University are respected and sought after by prospective employers.

In addition to the recognized regional accreditations, special accreditation for particular programs has been awarded as follows:

*Accreditation Board for Engineering and Technology,  
Technology Accreditation Commission*

*Accreditation Board for Engineering and Technology,  
Engineering Accreditation Commission*

*American Assembly of Collegiate Schools of Business*

*American Chemical Society*

*American Council on Social Work Education*

*American Dietetic Association*

*American Home Economics Association*

*American Medical Association*

*American Psychological Association*

*American Speech-Language-Hearing Association*

*Association of Collegiate Business Schools and Programs*

*Committee on Allied Health Education and Accreditation of American Medical Association*

*Council for the Accreditation of Counseling and Related Educational Programs (provisional)*

*Council for Professional Development of the American Home Economics Association*

*National Academy of Early Childhood Programs*

*National Accrediting Agency for Clinical Laboratory Sciences*

*National Association of Schools of Art and Design*

*National Association of Schools of Dance*

*National Association of Schools of Music*

*National Association of Schools of Public Affairs and Administration*

*National Council for Accreditation of Teacher Education*

*National League for Nursing*

*North Central Association of Colleges and Schools*

*Ohio Board of Nursing*

*Ohio State Department of Public Instruction*

The University also holds membership in the following educational organizations:

*American Association of Colleges for Teacher Education*

*American Association of Community and Junior Colleges*

*American Association of State Colleges and Universities*

*American Council on Education*

*American Society for Engineering Education*

*American Society for Training and Development*

*Association of American Law Schools*

*Council of the North Carolina State Bar*

*Department of Baccalaureate and Higher Degree Programs (National League for Nursing)*

*League of Ohio Law Schools*

*National University Continuing Education Association*

*North American Association of Summer Sessions*

*Ohio College Association*

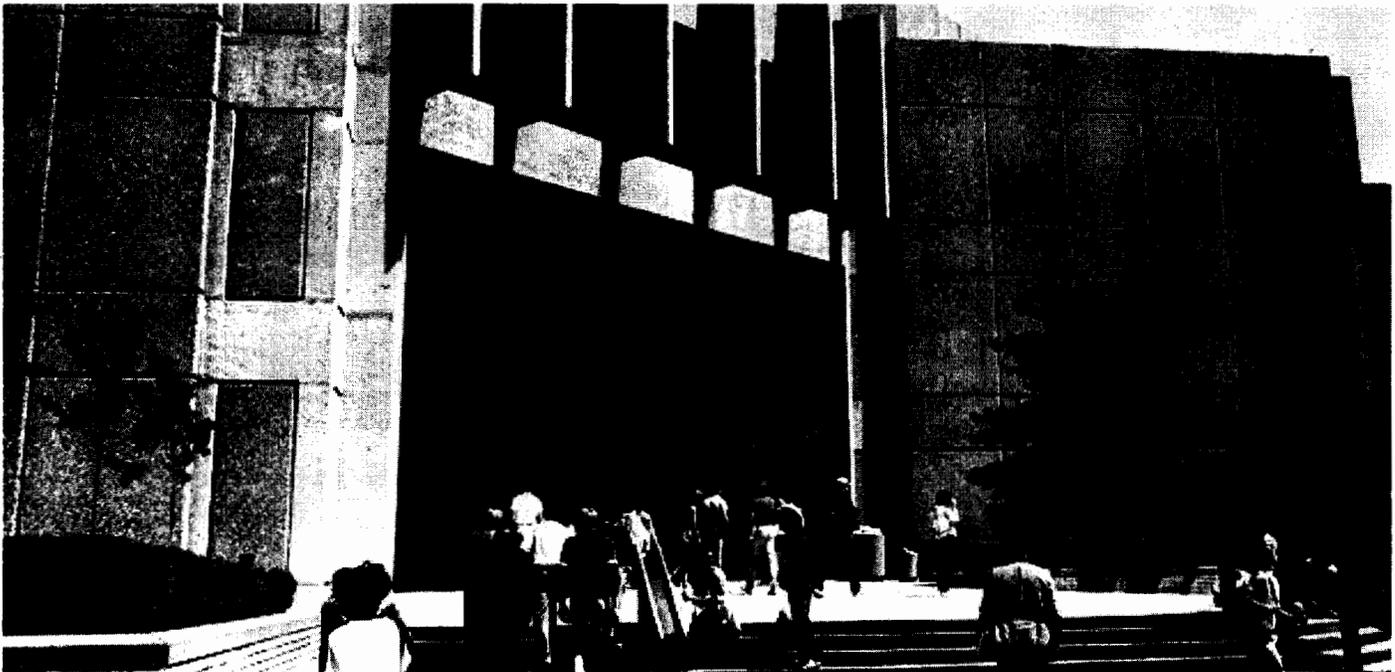
*Ohio Council on Continuing Higher Education*

*State of New York Court of Appeals*

The School of Law is accredited by:

*American Bar Association*

The American Association of University Women grants membership to women graduates with approved baccalaureate degrees from The University of Akron.



# Academics

The University of Akron offers comprehensive programs of instruction leading to the associate (two-year), bachelor's (four-year), master's (graduate), and doctoral (graduate or professional) degrees. A student may study in the College of Business Administration, Buchtel College of Arts and Sciences, Community and Technical College, College of Education, College of Engineering, College of Fine and Applied Arts, University College, School of Law, College of Nursing, and College of Polymer Science and Polymer Engineering.



- Environmental Geology
- Geology
- Geophysics
- Guidance and Counseling†
- History\*
- Home Economics and Family Ecology
  - Child Development
  - Child Life
  - Clothing, Textiles and Interiors
  - Family Development
  - Food Science
  - Nutrition/Dietetics
- Management
  - Human Resources
  - Information Systems
  - Materials
  - Quality
- Mathematical Sciences
  - Applied Mathematics
  - Mathematics
  - Statistics
- Middle School Education
- Multicultural Education
  - Multicultural
  - Multicultural-Bilingual
- Music
  - Composition
  - Music Education
  - Music History and Literature
  - Performance
    - Accompanying
    - Keyboard
    - Voice
    - Winds, Strings, and Percussion
  - Theory
- Nursing
- Outdoor Education
- Physical and Health Education
  - Adapted Physical Education
  - Athletic Training for Sports Medicine
  - Exercise Physiology and Adult Fitness
  - Physical Education
- Physics
- Political Science
- Polymer Science\*
- Psychology\*
  - Applied Cognitive Aging
  - Industrial/Gerontological
  - Industrial/Organizational
- Public Administration and Urban Studies\*
  - Public Administration
  - Public Administration/Law Joint Program
  - Urban Studies\*
- School Psychology
- Secondary Education\*
- Sociology\*
- Spanish
- Special Education
- Taxation
  - Taxation
  - Taxation/Law Joint Program
- Technical Education
  - Curriculum/Supervision
  - Guidance
  - Teaching
  - Technical Education
  - Vocational Home Economics - Child
  - Vocational Home Economics - Family
- Theatre Arts
  - Arts Administration
  - Theatre Arts

## GRADUATE SCHOOL

The Graduate School offers advanced study to students who wish further education beyond the baccalaureate degree with programs leading to the master's degree as well as the doctoral degree.

A separate publication detailing admission procedures and individual study requirements for graduate work is available from the Graduate School. The Graduate Bulletin may be obtained by calling the Graduate School at (216) 972-7663 or writing:

**Graduate School**  
**The University of Akron**  
 138 Fir Hill  
 Akron, OH 44325-2101

Graduate degree programs are listed below; a dagger (†) indicates programs that offer doctorates only; an asterisk (\*) signifies programs that offer both master's and doctoral degrees; the remaining disciplines offer master's degrees only.

- Biology
- Business Administration
  - Accounting
  - Business Administration/Law Joint Program
  - Finance
  - International Business
  - Management
  - Marketing
- Chemistry\*
- Communication
- Communicative Disorders
  - Audiology
  - Speech Pathology
- Counseling
  - Classroom Guidance for Teachers
  - Community Counseling
  - Elementary School Counseling
  - Marriage and Family Therapy
  - Secondary School Counseling
- Counseling Psychology\*
- Economics
  - Labor and Industrial Relations
- Educational Foundations
- Educational Leadership
  - Educational Administration
  - General Administration
- Higher Education Administration\*
- School Administration\*
- School Treasurer
- Elementary School Principal
- School Superintendent
- Secondary School Principal
- Supervision
- Elementary Education\*
- Engineering\*
  - Biomedical Engineering
  - Chemical Engineering
  - Civil Engineering
  - Electrical Engineering
  - Engineering
  - Engineering (Applied Mathematics)
  - Engineering (Engineering Management)
  - Mechanical Engineering
  - Polymer Engineering
- English
  - English
  - English Composition
- Geography and Planning
  - Geography
  - Geography/Urban Planning
- Geology
  - Earth Science
  - Engineering Geology



## SCHOOL OF LAW

The School of Law provides legal education through day and evening classes leading to the Juris Doctor degree. An applicant must have a baccalaureate degree from an accredited college or university. No particular course of undergraduate study is required for admission.

A separate publication detailing admission requirements and the procedure for applying for one of the School of Law's 150 day-session openings or 65 evening-session openings may be obtained by calling (216) 972-7331, or (800) 4-AKRON-U, or by writing:

**Director of Admissions**  
**School of Law**  
**The University of Akron**  
 Akron, OH 44325-2901

## BACCALAUREATE PROGRAMS

The University of Akron believes that the student should master basic courses in the humanities, social sciences, and physical sciences before proceeding to advanced work in the major. The University College concept guarantees this mastery. A student seeking a baccalaureate degree and having attained less than 30 college semester credits studies in the University College before transferring to a degree-granting college. Study in the University College develops students' abilities to understand and express ideas effectively and to comprehend the processes involved in accurate thinking. After completing the general studies phase, students are admitted to a degree-granting college, where they then concentrate on courses in their specific academic interests.

Programs are offered in:

Accounting	Geology
Advertising	<i>Engineering Geology</i>
Art	<i>Geophysics</i>
<i>Ceramics</i>	History
<i>Crafts</i>	Home Economics and Family Ecology
<i>Drawing</i>	<i>Dietetics</i>
<i>Graphic Design</i>	<i>Coordinated Program</i>
<i>Metalsmithing</i>	<i>Traditional Program</i>
<i>Painting</i>	<i>Family and Child Development</i>
<i>Photography</i>	<i>Child Development</i>
<i>Printmaking</i>	<i>Child Development:</i>
<i>Sculpture</i>	<i>Prekindergarten Certification</i>
<i>Studio Art</i>	<i>ChildLife Specialist</i>
Art History	<i>Family Development</i>
Automated Manufacturing	<i>Food Science</i>
<i>Engineering Technology</i>	<i>Business</i>
Biology	<i>Food Science/Product Development</i>
<i>Animal Physiology</i>	<i>Home Economics Education</i>
<i>Botany</i>	<i>Clothing, Textiles and Interiors</i>
<i>Cytotechnology</i>	<i>Business</i>
<i>Ecology</i>	<i>Interior Design</i>
<i>Medical Technology</i>	<i>Theatre Costume</i>
<i>Microbiology</i>	Humanities
<i>Zoology</i>	Management
Business Administration	<i>Industrial Accounting</i>
Chemical Engineering	Marketing
Chemistry	<i>Marketing Management</i>
Civil Engineering	<i>Sales Management</i>
Classics	Mathematical Sciences
<i>Greek</i>	<i>Applied Mathematics</i>
<i>Latin</i>	<i>Computer Science</i>
<i>Classical Civilization</i>	<i>Mathematics</i>
Communication	<i>Statistics</i>
<i>Broadcasting</i>	Mechanical Engineering
<i>Business and Organizational</i>	<i>Mechanical Engineering Technology</i>
<i>Interpersonal and Public</i>	Medical Technology
<i>Corporate Video</i>	Modern Languages
<i>Mass Media</i>	<i>French</i>
<i>News</i>	<i>German</i>
<i>Public Relations</i>	<i>Russian</i>
Communicative Disorders	<i>Spanish</i>
<i>(Speech Pathology and Audiology)</i>	Music
Computer Science	<i>Accompanying</i>
<i>Business</i>	<i>History and Literature</i>
<i>Mathematics</i>	<i>Jazz Studies</i>
Construction Technology (2+3)	<i>Music Education</i>
Cytotechnology	<i>Performance</i>
Dance	<i>Theory-Composition</i>
Economics	Natural Sciences
<i>Labor Economics</i>	<i>Combined B.S./M.D.</i>
Electrical Engineering	Nursing
<i>Computer Engineering</i>	Philosophy
<i>Electronic Engineering Technology</i>	Physical Education and Health Education
Elementary Education	<i>Physical Education</i>
<i>Dual Certification</i>	<i>Health Education</i>
<i>Kindergarten</i>	<i>Dance Education</i>
<i>Prekindergarten</i>	<i>Athletic Training for Sports Medicine</i>
English	Physics
Finance	Political Science
Geography and Planning	<i>Criminal Justice</i>
<i>Geography/ Cartography</i>	<i>Government Service</i>
<i>Geography/Travel and Tourism</i>	<i>International Service</i>
	<i>Pre-Law</i>
	<i>Public Policy Management</i>

Psychology  
 Secondary Education (all fields)  
 Social Sciences  
 Social Work  
 Sociology  
     *Anthropology*  
     *Corrections*  
     *Law Enforcement*  
 Special Education  
     *Developmentally Handicapped*  
     *Multihandicapped*  
     *Severe Behavior Handicapped*  
     *Specific Learning Disabled*

Speech Pathology and Audiology  
     *(see Communicative Disorders)*  
 Technical Education  
 Theatre  
     *Acting*  
     *Design/Technology*  
     *Musical Theatre*  
 Theatre Arts

## ASSOCIATE PROGRAMS

Our fast-paced age of technological development needs persons specifically trained for work in the semiprofessional, technical, and highly skilled professions. Most critically needed are laboratory technicians, health technicians, engineering assistants, sales people, supervisors, secretaries, and management assistants. The following is a list of associate degree programs:

American Sign Language	Mechanical Engineering Technology (2+2)
<i>Interpreting and Transliterating</i>	Medical Assisting Technology
Technology	Office Administration
Arts	<i>Administrative Assistant</i>
Automated Manufacturing Engineering	<i>International</i>
Technology (2+2)	<i>Legal (Inactive)</i>
Business Management Technology	<i>Medical Secretary</i>
<i>Accounting</i>	<i>Office Information Management</i>
<i>General</i>	<i>Word Processing</i>
<i>Data Administration</i>	Office Services Technology
<i>Small Business Management</i>	Polymer Technology
Commercial Art (Inactive)	Radiologic Technology
Commercial Photography (Inactive)	Real Estate (Inactive)
Community Services Technology	Respiratory Therapy Technology
<i>Alcohol</i>	Surgical Assisting Technology
<i>Gerontology</i>	<i>Surgeon's Assistant (Inactive)</i>
<i>Social Services</i>	<i>Surgical Technologist</i>
<i>Volunteer Programming</i>	Surveying and Construction Engineering (2+2)
Criminal Justice Technology (2+2)	Technology
<i>Advanced Officer Training</i>	<i>Construction</i>
<i>Corrections Emphasis</i>	<i>Surveying (Inactive)</i>
<i>Security Administration</i>	Technical Study - Automotive Technology
<i>Social Work Emphasis</i>	Transportation
Computer Programming Technology (2+2)	<i>Airline/Travel Industry</i>
Drafting and Computer Drafting Technology	
Educational Technology	<b>Wayne College Programs</b>
<i>Child Development</i>	Associate of Arts
<i>Elementary Aide (Inactive)</i>	Associate of Science
<i>Library Technician (Inactive)</i>	Associate of Technical Studies
Electronic Service Technology (Wayne)	Associate of Applied Business
Electromechanical Service	<i>Business Management Technology</i>
Technology (Inactive)	<i>Accounting Option</i>
Electronic Engineering Technology (2+2)	<i>Data Management Option</i>
Fire Protection Technology	<i>General Business Option</i>
Histologic Technology	<i>Sales and Services Option</i>
Hospitality Management (2+2)	<i>Office Administration</i>
<i>Culinary Arts</i>	<i>Executive Assistant Option</i>
<i>Hotel/Motel Management (Inactive)</i>	<i>Legal Secretary Option</i>
<i>Marketing and Sales</i>	<i>Medical Secretary Option</i>
<i>Restaurant Management</i>	Associate of Applied Science
Individualized Study	<i>Environmental Health and Safety</i>
Legal Assisting Technology	Technology
Manufacturing Engineering Technology (2+2)	<i>Microprocessor Service</i>
<i>Computer Aided Manufacturing</i>	Technology
<i>Industrial Supervision</i>	<i>Social Services Technology (2+2)</i>
Marketing and Sales Technology (2+2)	
<i>Advertising</i>	
<i>Computer Sales (Inactive)</i>	
<i>Fashion</i>	
<i>Retailing</i>	
<i>Sales</i>	

**Note:** The 2+2 programs are cooperative courses of study that allow students to complete a specific associate degree program followed by a related upper college course of study that results in the baccalaureate degree. All associate degree programs of technology are 2+2 within the College of Education's Technical Education baccalaureate degree.

## CERTIFICATE PROGRAMS

Students may add a dimension of depth to their education beyond a chosen major by pursuing one of the University's interdisciplinary or interdepartmental programs, which provide concentrated work in the following areas.

African-American Studies  
 Aging Services  
 Alcohol Support Services  
 Applied Politics  
 Canadian Studies  
 Cartographic Specialization  
 Chemical Dependency  
 Chemical Dependency Education and Prevention  
 Child-Care Worker  
 Commercial Photography (Inactive)  
 Computer Physics  
 Computer Science  
 Computer Software for Business  
 Criminal Justice Technology  
 Criminal Justice/Security Emphasis  
 Digital Electronics and Microprocessors  
 Drafting and Computer Drafting Technology  
 Environmental Studies  
 Fire Protection Technology  
 Gerontology  
 Hospitality Management: Culinary Arts  
 Hospitality Management: Hotel/Motel (Inactive)  
 Hospitality Management: Restaurant Management  
 Interior Design  
 Latin American Studies  
 Legal Assisting  
 Library Studies  
 Linguistic Studies

Manual Communication  
 Marketing and Sales Technology  
 Marketing and Sales Technology: Advertising  
 Office Administration:  
 Administrative Assistant  
 Office Administration:  
 Office Information Management  
 Office Administration: Word Processing  
 Peace Studies  
 Planning with an emphasis on City or Regional Resource Studies  
 Professional Communication  
 Programming Skills Enrichment  
 Real Estate  
 Small Business Management  
 Russian Area Studies  
 Supervision and Management  
 Surgeon's Assistant (Inactive)  
 Surgical Technologist  
 Teaching English as a Second Language  
 Transportation Studies  
 Travel and Tourism  
 Volunteer Program Management  
 Women's Studies

### Wayne College Certificate Programs

Data Management  
 Gerontological Social Services  
 Medical Transcription  
 Personal Computer Repair  
 Word Processing

## INTERNATIONAL EDUCATION :

### Study, Work, Travel Abroad

International experience and global awareness are critical to the university graduate entering today's workforce. In addition to enhancing the student's academic background and increasing self-esteem, studying abroad is an excellent way to develop academic and professional skills that will enable the student to gain a competitive edge in today's job market. Among other abilities, the international student develops critical thinking; cultural, political, and economic understanding; decision-making; and language skills.

The University of Akron has currently established study abroad affiliations with universities in Australia, Belgium, Canada, China, England, France, Germany, Israel, Korea, Mexico, Puerto Rico, Russia, and Singapore. Programs are open to all students, regardless of major, language training, or financial means. A program in The Netherlands is also available for Business majors. Study abroad may be undertaken for an academic year or a semester, depending on the country.

Summer and intersession courses taught overseas by University faculty are also available. A list of these courses, which are organized by the relevant academic departments, may be obtained from the Office of International Programs.

Students receive elective credit towards graduation for all courses. Some courses may be applicable to the University's language and General Education requirements, with prior permission. Credits toward a major, minor, or certificate may be completed abroad with the consent of the student's college.

Students may use their financial aid in all University study abroad programs. The programs are affordable, and some programs are at or below the average residential cost of attending The University of Akron. Details on nationally competitive scholarship awards; study, work, volunteer, and travel abroad literature; and international career information are available in the Study Abroad Library in the Office of International Programs. International internships are available and are designed to provide an educational work experience to students who want to enhance academic and career preparations.

For study or research after graduation, a student should inquire about scholarship programs abroad late in his/her junior year. The Office of International Programs houses information on the Fulbright, Marshall, National Science Foundation, National Security Education Program (NSEP), Rhodes, and Truman, as well as other grant opportunities.

The International Student Identity Card (ISIC) and International Teacher Identity Card (ITIC) are available for purchase in the Office of International Programs. These cards are globally recognized and provide discounts for students and faculty on airlines, museums, car rentals, hotels, and international telephone calls. Some insurance and a 24-hour, toll-free help line providing medical, financial, or legal emergency assistance worldwide are also included.

More information on study abroad, international scholarships, internships, or international identity cards is available in the Office of International Programs, (216) 972-6349, The Polsky Building, Room 483.

## UNIVERSITY HONORS PROGRAM

The University's Honors Program provides scholarships, curriculum options, special housing, and other advantages to especially motivated and high-achieving undergraduates who meet the program's admission requirements. The Honors Program student completes a major in one of the bachelor's degree-granting colleges, selects a set of Honors Distribution Requirement courses in place of the University's General Education Program, participates in a series of Honors Seminars (Colloquia), and creates a Senior Honors Project. The successful Honors Program student is recognized at graduation with an honors degree and the designation of University Scholar.



## THE UNIVERSITY OF AKRON SERVICE CONSORTIUM (UASC)

The University of Akron Service Consortium (UASC) provides a wide range of educational, research, and technical services that enhance the effectiveness and quality of life-long learning. In addition, UASC provides services that require the special expertise of the faculty and staff to better serve the economic and social development of Northern Ohio.

The University of Akron has a strong tradition of service to the community, through research, consultation, business partnership, and continuing education. Buchtel College's first class (1872) was composed of 46 regular freshmen and 164 preparatory, noncredit students, including Civil War veterans. Within a year, Buchtel College enrolled noncredit students in business courses in an outreach center in Barberton.

UASC is the liaison between external constituencies in search of services and technical expertise available through the University and those academic and professional units and individuals who can best supply those needs. The primary goals of UASC are to:

- 1) Provide continuing and professional education.
- 2) Participate actively in technology transfer.
- 3) Share in the significant discoveries of pure and applied scientific research conducted by University faculty.
- 4) Support the development of Ohio businesses.

- 5) More efficiently use the The University of Akron's resources to meet important social and economic needs.
- 6) Facilitate certification of health care and human services professionals.
- 7) Enhance articulation between the University and area primary and secondary schools.

UASC is a service unit administered by the Vice President of Research and University Development, Dr. Nicholas D. Sylvester, III.

The Director of Central UASC coordinates UASC Centers' services. M. Larry Schmith, Interim Director.

Current UASC Centers and their directors are:

Akron Polymer Training Center  
Polymer Science and Polymer Training  
Nancy Clem, Director

Center for Employee Development and Training  
Community and Technical College  
Eloise Lafferty, Director

Center for Organizational Development  
College of Business Administration  
Dr. Jonathon Rakich, Director

College of Fine and Applied Arts  
Melissa Paul, Director

Health-Related Continuing Education  
M. Larry Schmith, Director

## SUMMER SESSIONS

The University's Summer Sessions provide educational opportunities for the student who wishes to attend college classes over the summer. Summer Sessions include work toward associate, baccalaureate, and advanced degrees as well as additional education in students' chosen professions.

## OFF-CAMPUS PROGRAMS

As an urban institution of higher learning, the University clearly identifies and supports its public service role through a variety of off-campus programs. The University offers special institutes, workshops, and courses to professional groups through the academic departments, through continuing education, and through Developmental Programs.

### The University of Akron Center - Coventry North

In cooperation with Coventry local schools, The University of Akron Center - Coventry North opened in January 1995 to provide accessible higher education services to the communities of southern Summit and northern Stark counties.

The Center offers both credit and noncredit coursework on an evening and weekend basis during each fall, spring, and summer term. Class offerings feature general education, continuing education for business and education professionals, and broad opportunities for educational, recreation and life-long learning for students of all ages.

The Center also provides area high school students with access to the state-funded Post-Secondary Enrollment Program, which allows eleventh and twelfth graders to begin college work while still in high school.

The University of Akron Center is located on Manchester Road within the North Campus of Coventry High School.

## THE UNIVERSITY OF AKRON - WAYNE COLLEGE

To meet the needs of citizens in Wayne, Holmes, and Medina counties, The University of Akron - Wayne College opened its doors in 1972. Wayne College offers eight technical programs as well as the first two years of most baccalaureate programs. The following degrees are available from The University of Akron - Wayne College: Associate of Arts; Associate of Science; Associate of Technical Studies; Associate of Applied Business in Business Management Technology and in Office Administration; Associate of Applied Science in Environmental Health and Safety Technology, Microprocessor Service Technology and in Social Services Technology. Please refer to Section 4 in this Bulletin for more information about Wayne College programs.



# The Campus

During recent years, the University campus has undergone many major changes. In 1951 the University's 13 acres encompassed only 10 buildings. Currently the Akron campus covers 170 acres and includes 77 buildings. Plans have been made to renovate and build additional academic, recreational, and parking facilities. The campus is illuminated at night and security personnel patrol the area hourly.

## LOCATION

The University is situated in a large metropolitan area. The campus, although centrally located within the city, features parklike pedestrian areas. Students have easy access to retail outlets, transportation, and churches. Akron is easily reached by automobile from major national east-west routes (Interstates 80, 90, 76, and the Ohio Turnpike) and north-south routes (Interstates 71 and 77), all of which link Akron to the surrounding states and regions. The University itself is located between East Buchtel Avenue and Carroll Street in the downtown area. For airline passengers, limousine service is available from the Cleveland Hopkins International Airport and the Akron-Canton Regional Airport, south of Akron.

## BUILDINGS

Many of the buildings on campus bear the names of prominent persons who are recognized for their contributions in administration, education, business, science, or University service. Major buildings include:

**Admissions Building.** Located at 381 Buchtel Common, the Office of Admissions assists students with applications, requirements, and procedures for undergraduate, postbaccalaureate, guest, transfer, auditing, or special student status.

**Auburn Science and Engineering Center.** Named for Dr. Norman P. Auburn, 10th president of the University, this complex is one of the largest academic buildings in the state. The center houses the College of Engineering, including the dean's office, the Engineering Co-op Office; Mechanical, Electrical, Chemical, and Civil Engineering; as well as the Department of Biology, the recently completed \$2 million biology research facility, and the science and engineering holdings of University Libraries.

**Ayer Hall.** Named for the first dean of the College of Engineering, Frederic E. Ayer, Ayer Hall provides classrooms and offices for the mathematics and physics departments.

**Ballet Center.** This center, located at 354 East Market Street, houses dance studios, a choreography laboratory, faculty offices, and offices for the School of Dance, the Ohio Ballet, and the Dance Institute.

**Bierce Library.** Named for General Lucius V. Bierce, an Akron mayor, lawyer, historian, state senator, philosopher, philanthropist, and soldier, the building opened in the spring of 1973. In addition to the book and periodicals collections, the facility houses audio-visual materials, maps, and microforms. University Libraries, including science and technology materials located in the Auburn Science and Engineering Center, have holdings of more than 2.8 million items.

**Buchtel Hall.** Originally built in 1870, this structure was destroyed by fire in 1899 and rebuilt in 1901 (Buchtel Hall II). The administrative center of campus, Buchtel Hall was completely restored in 1973 following a devastating fire in 1971. It is the University's link with its predecessors, Buchtel College. It provides office space for numerous administrative officials of the University.

**Buckingham Center.** This building houses a Cultural Diversity Center, which includes the Black Cultural Center, Peer Counseling Program, Diversity Council, and a repository of African-American history.

**Business Administration Building.** This \$9.1 million facility, located at 259 South Broadway, was completed in 1991. The structure consolidates office, classroom, and laboratory facilities for the dean of the College of Business Administration, the George W. Daverio School of Accountancy, and the departments of Finance, Marketing, and Management.

**Carroll Hall.** Adjacent to the Gardner Student Center, Carroll Hall houses classrooms, laboratories, and offices for the departments of Counseling and Special Education, Geography and Planning, Developmental Programs, Institutional Research, and the academic computer testing facility, as well as the University's Network Services and the Electronic Systems operation.

**Central Services Building.** At 185 South Forge Street, the Central Services Building houses the administrative service departments of central stores, printing services, and mail room.

**Computer Center.** Purchased and renovated in 1981 for \$1.3 million, this building at 185 Carroll Street houses the University's Information Services offices, main computers, and workrooms, as well as student and faculty microcomputer labs and time-sharing terminals.

**Computer Store.** Just west of the Gardner Student Center, the Computer Store is operated by Information Services.

**Crouse Hall.** Crouse Hall houses the Department of Geology, the Center for Environmental Studies, classrooms, and some of the College of Education offices.

**E.J. Thomas Performing Arts Hall.** Named for Edwin J. Thomas, prominent industrialist and dedicated member of the University Board of Trustees from 1952 to 1975, this cultural center, which cost more than \$13.9 million, was formally opened in 1973. Designed to accommodate concerts, opera, ballet, and theater productions, the hall is a masterpiece in architecture, acoustics, and creative mechanisms. It stands at the corner of University Avenue and Hill Street.

**Fir Hill Center.** This recently remodeled building, north of East Buchtel Avenue at Fir Hill, houses the Office of Alumni Relations, as well as temporary quarters for the Department of Research Services and Sponsored Programs.

**Firestone Conservatory.** On the first floor of Guzzetta Hall, this facility provides classrooms, practice rooms, and offices for music.

**Folk Hall.** This building, at 150 East Exchange Street, provides modern, well-equipped School of Art facilities. Studios are available for graphic arts, photography, drawing, painting, metalsmithing, ceramics, and weaving. The Emily Davis Art Gallery is also located in the facility.

**Forge Building.** This building at 171 South Forge Street houses the College of Engineering's Construction Technology Program, including offices, computer lab, and classroom space.

**Gallucci Hall.** This building, at 200 East Exchange Street, formerly a Holiday Inn, is a co-ed residence hall and home to the Honors Program and honors students. It also provides temporary quarters for the Hospitality Management Department and Crystal Room dining facility.

**Gardner Student Center.** This complex was named for Donfred H. Gardner, who was appointed dean of men in 1926, the University's first dean of students in 1937, the first dean of administration in 1955, and later, in 1959, was promoted to vice president. He retired in 1962. This facility, which serves as a unifying force in the life of the institution, houses nearly 80 percent of all nonacademic activities on campus. It provides bowling alleys, meeting rooms, lounges, student activity and publication offices and workrooms, a game and billiard room, a bookstore, bank facilities, the Gardner Theatre, a cafeteria, and other dining facilities.

**Mary E. Gladwin Hall.** Housing the College of Nursing and biology laboratories, this building was named in honor of distinguished alumna Mary E. Gladwin (1887), who rendered unparalleled service to the nation during World War I. The \$10 million complex opened in 1979 and includes the administrative offices of the College of Nursing, faculty offices, the Center for Nursing, a Learning Resources Center that includes patient care simulation areas, an audio-visual center, and a state-of-the-art computer learning center.

**Guzzetta Hall.** Complementing the E.J. Thomas Performing Arts Hall, this facility was constructed directly across Hill Street. The \$5.5 million structure, dedicated in October 1976, houses the Office of the Dean of the College of Fine and Applied Arts, laboratory space for the School of Communication, and departmental space for the schools of Theatre Arts and Music. In addition to providing more than 40 student practice rooms, the complex houses radio and television studios, WZIP-FM, a small experimental theater, and a 300-seat recital hall.

**James A. Rhodes Health and Physical Education Building (JAR).** This structure on Buchtel Common is connected to Memorial Hall by a pedestrian bridge over South Union Street and contains an intercollegiate basketball facility seating 7,000, an indoor jogging track, physical education laboratories, classrooms, the athletic director's office, the sports information office, athletic offices, and a ticket office.

**Howe House.** Located on Fir Hill, this 19th-century mansion has been designated a Historic Place by the National Park Service.

**Knight Chemical Laboratory.** This \$10 million complex is named in honor of Dr. Charles M. Knight, who taught the first courses in rubber chemistry at Buchtel College as early as 1909. Opened in 1979, the building houses the Department of Chemistry and features many innovative laboratories with the most sophisticated safety equipment, as well as classrooms and faculty and administrative offices.

**Kolbe Hall.** This building, named for the first president of the Municipal University of Akron, Parke R. Kolbe, is soon to be remodeled for the School of Communication, Radio Station WZIP, and a proposed long-distance learning facility. It also houses the University Theatre.

**Leigh Hall.** Named in honor of Warren W. Leigh, first dean of the College of Business Administration, this facility on Buchtel Common currently houses the John S. Knight Auditorium and interim space for School of Communication faculty (during the 1995-96 Kolbe Hall Construction Project).

**Paul E. Martin University Center.** Located at 105 Fir Hill, the Paul E. Martin University Center has changed from a private club serving dues-paying members to a University-operated restaurant and banquet center. The table service restaurant is open for lunch between 11:30 a.m. and 2 p.m. Business and departmental functions, banquets, receptions, and parties can be scheduled during the hours of

7:30 a.m. to noon. The office of the Department of Development is located on the upper floors of the building.

**McDowell Law Center.** Named for C. Blake McDowell, prominent local attorney, alumnus, and benefactor of the University, the center houses the School of Law. Opened in 1973 at a cost of \$2.5 million, it provides space for the law library, classrooms, moot courtroom, appellate-review office, seminar rooms, and faculty office. A \$2.8 million addition provides library and support space, and a \$1.5 million second expansion has linked McDowell Law Center to West Hall, providing additional administration office space. The law complex stands at the corner of University Avenue and Wolf Ledges Parkway.

**Memorial Hall.** Dedicated to the memory of Summit County men and women who died in World War II, this is the companion building to the JAR. It contains offices of the Department of Health and Physical Education, a main gymnasium, a gymnastics area, a combatives area, a motor learning lab, a human performance lab, an athletic training lab for sports medicine, a weight training and fitness center, an athletics batting cage, the intramurals sports office, and classrooms.

**North Hall.** Located on South Forge Street, this building houses, on a temporary basis, supplemental service space for the campus police department.

**Ocasek Natatorium.** The \$6 million natatorium, completed in 1988, is a 70,000-square-foot structure that houses an Olympic-size swimming pool with adjacent spectator seating area, and locker rooms and showers. The center also houses nine racquetball courts as well as weight room facilities. The natatorium is named for former Ohio State Senator Oliver Ocasek.

**Olin Hall.** Named in honor of Professor Oscar E. Olin and Mr. Charles Olin, this facility was completed in May 1975. The hall houses the Office of the Dean of the Buchtel College of Arts and Sciences and the following departments and institutes: Classics, Economics, English, General Studies, History, Modern Languages, Political Science, Philosophy, Sociology, the Ray C. Bliss Institute of Applied Politics, and the English Language Institute. The complex is at the corner of Buchtel Common and South Union Street.

**100 Lincoln Street Building.** This building houses the Purchasing Department and Network Services, and Telecommunications Department offices, as well as the office of the University Architect and Senior Director of Facilities Planning, and the Office of the Director of Space Utilization.

**108 Fir Hill -** This former Girl Scout regional headquarters building has been renovated to accommodate the University's Center for Child Development.

**143 Union Street Building (Newman Center).** This recently purchased building provides administrative office space for the University treasurer, budget director, the payroll department, and Information Services' network services group.

**225 East Mill Street.** This building is home to the Akron Polymer Training Center, an instructional classroom and laboratory facility for Polymer Engineering and Engineering and Science Technology Polymer Science classes.

**Olson Research Center.** This remodeled warehouse on Forge Street houses the Department and Institute of Biomedical Engineering and the Department and Institute of Polymer Engineering.

**Physical Facilities Operations Center.** This building, located at 146 Hill Street, houses physical facilities offices, craft shops, the central heating and cooling distribution center, and the Campus Police/Security Department.

**The Polsky Building.** The largest academic building in Ohio, this renovated downtown department store is home to the Community and Technical College dean's office, and the departments of Business Technology, Public Service Technology, Allied Health Technology, and Associate Studies. Also located here are the University Archives, the Archives of the History of American Psychology, the School of Communicative Disorders and its Speech and Hearing Center, the Department of Public Administration and Urban Studies, the Center for Urban Studies, the School of Social Work, and the University of Akron Service Consortium office. A fast-food service facility and a campus bookstore are in operation on the High Street level (third floor).

**Polymer Science Building.** Construction of the \$17 million Polymer Science Building was completed in the spring of 1991. This two-tower structure of steel, concrete, and glass, located at 170 University Avenue, houses offices for the dean of the College of Polymer Science and Polymer Engineering, and the Rubber Division of the American Chemical Society. The facility features a 200-seat lecture hall, offices, classrooms, and research laboratories for the Institute and Department of Polymer Science.

**Robertson Dining Hall.** This building at 248 East Buchtel Avenue has a cafeteria and dining room for students, as well as the campus infirmary, which provides health services for the University.

**Rubber Bowl.** This off-campus stadium at 800 George Washington Boulevard, four miles from campus, features an artificial turf playing field, seating for 35,000, locker rooms, concessions, and a press box.

**Schrank Hall.** Named for Harry P. Schrank, longtime member and chairman of UA's Board of Trustees, this complex, which adjoins Auburn Science and

Engineering Center, is composed of two academic structures and a parking deck. Schrank Hall North contains the office of the president of the Faculty Senate, other offices, and classroom space. Schrank Hall South provides facilities for the School of Home Economics and Family Ecology, the Community and Technical College's Engineering and Science Technology Division, and the Army and Air Force ROTC.

**Simmons Hall.** Named for Hezleton Simmons, University president from 1933 to 1951, this hall houses the University Counseling and Testing Center and the Department of Psychology. The Institute for Life-Span Development and Gerontology occupies a portion of the building. A student interested in employment counseling and assistance will find the Placement Services office in this facility.

**Spicer Hall.** This major student services building houses the Registrar's Office, Academic Advisement Center, the Office of Student Financial Aid, University College, the Office of Services for Students with Disabilities, and the Student Assistance Center, as well as the Parking Systems office, and offices for the University Controller, the University Auditor and External Auditor, and Accounts Payable and Receivable.

**277 Broadway Street Building.** This building provides administrative space for the Office of Human Resources, including benefits, employment services, labor and employee relations, and personnel services, as well as the Department of University Communications.

**West Hall.** This renovated structure on Wolf Ledges Parkway is part of the McDowell Law Center.

**Whitby Hall.** Named for G. Stafford Whitby, a pioneer in the development of polymer science, this building opened in 1975. Housed in this facility are some polymer science laboratories and the Department of Chemical Engineering.

**Zook Hall.** Named to honor George F. Zook, president of the University from 1925 to 1993, this Buchtel Common facility houses the College of Education and provides a lecture room that seats 245, general classrooms, a handicrafts room, a teaching demonstration classroom, a microteaching laboratory, educational media lab, and the Student Teaching Office.

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## FACILITIES AND EQUIPMENT

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The University's addition of modern teaching aids demonstrates its recognition of the need, in this technological age, for up-to-date facilities and equipment. Many of these facilities are described below.

### Buchtel College of Arts and Sciences

The **Department of Biology** houses greenhouses, controlled-environment chambers, a new animal research facility, a molecular biology research center, modern laboratories, and equipment that includes advanced light microscopes (differential interference contrast, fluorescence), electron microscopes (scanning and transmission), scintillation counters, ultracentrifuges, DNA sequencing apparatus, and physiographs; vehicles and boats are available for fieldwork.

The **Department of Chemistry** is located in Knight Chemical Laboratories. The department offers outstanding instrumentation, such as nuclear magnetic resonance spectrometers, research-grade gas chromatographs, infrared and ultraviolet spectrophotometers, and other modern research tools for identification and characterization of compounds. The University's Chemical Stores facility is located in the Department of Chemistry and maintains an inventory of more than 1,100 items, including chemicals, glassware, and apparatus.

The **Department of Economics** is housed on the second floor of Olin Hall in a modern office facility with space for faculty and graduate assistants. The Emile Grunberg Memorial Reading Room offers an intimate setting for one-on-one counseling for faculty and students as well as offering the collection of the past great distinguished professor. Computing is very important to the study of economics. Students of economics have a shared computer facility containing 10 Gateway 2000 machines running both DOS and Windows as well as a private computer lab within the department. A variety of software programs including economic tutorials, WordPerfect, SAS/MVS, SAS/VM and SAS/PC as well as laser printing services are available. Network access allows students to search for books on Ohio Link, submit jobs remotely to the University mainframe, or search the world via Internet for the latest economic information. The department maintains an active Gopher and World Wide Web access to economic resources worldwide. The proximity of the labs to the faculty encourages the type of interaction that will enhance students' learning.

The **Department of English** maintains a Communication Center, where English students may create and print papers, do desktop publishing, and gain telecommunication access through the ZIPnet and Internet. Department faculty edit the *Thomas Wolfe Review* and the *Faulkner Journal*. The Thackberry Room, located in the department, is a reference library for faculty and graduate students. It holds bibliographies, indexes, and reference works relevant to all specialties taught in the department. Graduate seminars are held in the department's own seminar room near faculty offices.

The **Department of Geography and Planning** houses a modern cartographic laboratory with adjoining darkroom, equipment rooms, and a research collection of maps, aerial photos, and periodicals. Major equipment includes map compilation projectors, computer work stations, digital plotting devices, process film camera, vacuum frame, and typesetting equipment.

The **Department of Geology** has modern instrumentation for field and laboratory studies. Among the equipment are an automated electron microprobe, automated X-ray diffraction system, atomic absorption spectrometer, ion chromatograph, coal and sulfur analyzers, oxygen bomb calorimeter, gravimeter, resistivity gear, refraction seismography, magnetometers, image analyzer, cathodoluminoscope, microcomputer laboratory with printers, plotters, and a digitizer, core laboratory, research microscopes, a well-equipped darkroom, rock saws, thin-section equipment, portable rock corer, one four-wheel-drive vehicle, and two 15-passenger vans.

The **Department of History** in Olin Hall is housed in a modern office suite with space for graduate assistants as well as professors. The Clara G. Roe Seminar Room is used for graduate seminars.

The **Department of Mathematical Sciences** is located on the upper floors of Ayer Hall. Students of mathematics, statistics, and computer science have access to a wide variety of computing facilities, operating environments, languages, and software in laboratories maintained in and by the department.

The two labs, which contain Intel-based computers, are connected by a Banyan VINES network. One of these labs is frequently used for class laboratory sessions for up to twenty students. This is a standard feature of many entry-level courses in mathematics and computer science. The other lab is an open lab in which students find a similar environment in which to work independently on assignments. The PCs themselves have a DOS/Windows environment. NSF TCP/IP has been installed and access is provided to the Internet via ftp, telnet, MOSAIC, and Netscape. Software available includes Maple, Fourier, Lindo, ISETL, and MATLAB for mathematics; Turbo C++, MacroAssembler, and Turbo Pascal for computer science; and Word Perfect and Microsoft Works for more general use.

Another open laboratory is mainly devoted to a UNIX client/server environment. There are a number of Sun 3 workstations (SUN OS 4.1.1/X-Windows) and ten SUN SparcStations (Solaris 2.3/Openwindows). These devices are used for many of the upper-level computer science courses. They are on a separate local ethernet network. They also support MOSAIC and Netscape.

The campus has a backbone network to which each of the local area networks is connected. Also on the backbone are a DecStation 5000 running ULTRIX, an IBM 4383 running VM, and an IBM 3090 running MVS. All of these machines are available from the department via the local area networks and also via terminals located in parts of the two open computer labs. Access to SAS and SPSS for statistical processing, to Model 204, SQL/DS and DB/2 for database applications, and to a variety of programming languages, editors, and network services is provided to students and faculty by these machines.

Two undergraduate statistical laboratories are also supported by the department. Minitab is available in these laboratories on either Macintosh or Intel-based computers. These laboratories are used for scheduled laboratories in statistics. They are not currently networked.

Two special graduate/research laboratories are also part of the Mathematical Sciences Department. The graduate computation and research lab contains SUN SparcStations, IBM RISC 6000s, and Silicon Graphics Workstations. In addition, a MasPar is provided for parallel processing. The Center for Statistical Consulting is used to provide graduate statistical students with work experience in which they assist others in the solution of a wide variety of statistical problems. The Center is equipped with a Macintosh computer with Minitab, JMP, and SYSTAT software, as well as a connection to VM for access to SAS and SPSS mainframe computing.

The campus is on both BITNET and the Internet E-mail is available campus-wide. Most machines in the department also provide access to network news and discussion lists to encourage students and faculty to keep up to the minute on subjects of interest. A local Gopher, a menu-driven utility, is used on some systems to access information. On others, various Web browsers are used (as indicated above). Remote logins from the university are permitted to those who have accounts elsewhere. For example, many faculty members have accounts on the Cray supercomputer in Columbus, Ohio. Dial-in access to all facilities, excepting only the Banyan network, is available. Students are encouraged to work at the location that is most convenient to them. Any communication software using Kermit protocols can be used. Slip and ppp may be available soon.

Computer languages available include, but are not limited to, C, C++, LISP, FORTRAN, BASIC, COBOL, Pascal, IBM Assembler, Macro Assembler, and REXX. Many of these are available on a variety of platforms providing exposure to several dialects of the languages.

The proximity of the faculty offices to the computer laboratories encourages regular interaction between students and faculty. E-mail is another vehicle for student-faculty communication. Staff members provide introductory seminars and are always available to assist and guide students. A friendly, informal, helpful atmos-

phere makes the Department of Mathematical Sciences an enjoyable place to learn and gain practical experience.

A most important resource of the **Department of Modern Languages** is the language laboratory in Olin Hall. The language laboratory schedules working sessions for all beginning and some advanced language courses as an integral part of the course, as well as for individual and voluntary student study time.

In the **Department of Political Science**, the Survey Research Center supervises a computer-assisted telephone interviewing laboratory available to the campus research community. The laboratory consists of 24 IBM PS/2 microcomputers connected via a network to a variety of system servers. Each interviewer station is acoustically insulated from other stations and has specialized telephone and automatic dialing equipment. The survey facility is used for grant and contract research covering national, state, and local studies. When not required for survey projects, the computer network is used for a variety of classroom exercises and student research projects. Another 25 stations are available for faculty and graduate student support.

The **Department of Psychology** owns over 90 microcomputers that are available to faculty and students. Also available are research areas for the study of small-group behavior, and a psychology clinic complete with videotape capabilities for the study of counseling processes and outcomes. Two dedicated research labs contain Gateway 2000 386/33 PCs. A word processing lab contains IBM PS/2s and HP LaserJet printers. A mainframe access lab for exclusive use by the psychology department has connections to the mainframe via PCs, terminals, and a printer. Supported are major statistical packages—SAS, SPSS, and LISREL—which are accessed through VM-CMS. Portable computers are available for field research. A full-time research programmer/analyst supports the hardware and software for the department and writes custom software for computerized experimental control, stimulus display, and data collection. WordPerfect for word processing and Lotus Freelance Graphics for chart and graphic production are used throughout the department.

The **Department of Sociology** facilities include research laboratories used for funded research projects and a complete microcomputer laboratory for all graduate students. The department shares a computer facility for all students in Olin Hall which includes microcomputers and terminals directly linked to the University's mainframe computer. In addition, a computer-assisted telephone interviewing (CATI) system laboratory is used for student training in survey research. The anthropology laboratories contain hominid fossil casts, archaeological collections, and a variety of equipment used in archaeological field research projects.

## Community and Technical College

Most offices and specialized laboratories of the Community and Technical College are located in The Polsky Building and Schrank Hall South. However, the college also uses portions of Gallucci Hall. In addition, Community and Technical College classes are frequently scheduled in classrooms all over the University campus and at local businesses.

The Business Technology Division has many extensive laboratory facilities in The Polsky Building. The Computer Programming area has a cluster of well-equipped personal computer labs, plus connections to the University's mainframe computer. The Office Administration program has labs dedicated to word processing, typing, business machines, shorthand/tape dictation, and information management. The Hospitality Management program is located in Gallucci Hall, where a complete restaurant (with kitchen and a 120-seat dining room) serves food to the general public as part of its curricula in food service management and culinary arts.

The Engineering and Science Technology Division is located primarily in Schrank Hall South. Many computer-related laboratories provide hands-on experience for students. The Drafting and Computer Drafting Technology program maintains two drafting laboratories and a new Computer-Aided Drafting Laboratory. The Computer-Aided Drafting Laboratory is equipped with 30 Hewlett Packard Vectra QS/16 microcomputer work stations utilizing AutoCAD software. The Electronic Engineering Technology program provides a circuits laboratory, electronics laboratory, control system laboratory, digital circuits, and system laboratory equipped with personal computers and a facility for fabricating printed circuit boards. The Mechanical Engineering Technology program maintains two drafting laboratories, a fluids and thermal laboratory, a machine shop for machine tool fabrication, a computer graphics and a CNC programming facility, a CNC machining laboratory, a strength of materials laboratory, and a metallographic laboratory. Manufacturing Engineering Technology labs include equipment for precision inspection and the study of robotics. A variety of surveying instruments including new electronic instruments and computer facilities for problem solutions are available for use in the Surveying and Construction Engineering Technology program. In addition, the division has laboratories for physics courses in mechanics, electricity, heat, light, and sound.

The Allied Health Technology Division is located in The Polsky Building, where laboratories are dedicated to Medical Assisting, Respiratory Care, Surgical Technology, and Histologic Technology.

The Division of Associate Studies is located in The Polsky Building, room 131.

The Public Service Technology Division is located in The Polsky Building, where its Criminal Justice lab is utilized. The American Sign Language Interpreting and Transliterating program makes use of labs there also, and the Child Development program interfaces with the University Nursery Center at 108 Fir Hill. The Fire Protection program has an extensive lab in The Polsky Building.

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## College of Business Administration

The **College of Business Administration** is located in the 81,000-square-foot, four-story College of Business Administration Building, which houses the college's offices, classrooms, computer laboratories, and advising services. The departments of Finance, Management, Marketing, and the George W. Daverio School of Accountancy share the building.

Tiered, amphitheater-style classrooms permit close contact between students and professor. The Milton and Henrietta Kushkin Computer Laboratory provides three computer classrooms, each equipped with nearly 40 personal computers and a homework laboratory for students.

The Carl V. and Clyde A. Fisher Sales Laboratory provides the college with five small group lab rooms connected by one-way mirrors to a central monitoring and control room. Sophisticated videotape equipment permits the recording of activities in each lab room which can then be shown to students to provide immediate feedback. This facility is a key resource in college programs for training in sales, sales management, negotiation, leadership, and employment interview preparation.

The Goodyear Tire and Rubber Company Lecture Hall, the building's largest classroom, is equipped with a state-of-the-art audio-visual system capable of projecting textbook material, transparencies, slides, videotapes, computer screen images, and the like onto the room's 10-by-10-foot screen.

Facilities for seminars, continuing education programs, faculty meetings, and student organization meetings are provided in the John P. Murphy Executive Seminar Room and adjacent small-group meeting room.

The CBA Satellite Placement Center is located in a suite of eight offices on the second floor. The suite includes a reception area, resource library, and interview rooms.

Offices of the college's student organizations are located in the James Dunlap Student Organization Office Suite just off the atrium lobby.

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## College of Education

The offices, laboratories, and other facilities of the College of Education are located in Zook Hall, Carroll Hall, Crouse Hall, the James A. Rhodes Health and Physical Education Building, and Memorial Hall.

The **Department of Educational Foundations and Leadership** serves undergraduate and graduate students in the College of Education. The department serves undergraduate students by providing instruction in core courses in teacher education. In the area of leadership, the department provides graduate courses in school administration and higher education administration. The department members also teach the core curriculum of historical, philosophic, psychological, and social foundations required in all graduate education programs. They teach, advise, and supervise problems, theses, and dissertations of students in their degree-granting graduate programs, the master's programs in Educational Foundations, the master's and doctoral programs in Educational Administration, and the master's and doctoral programs in Higher Education.

The **Department of Physical and Health Education** prepares students for careers in teaching, coaching, related recreational fields, and related health fields. There are laboratories for the study of exercise physiology, motor behavior, teaching skills (microteaching), and computer utilization in physical and health education. The department has access to the James A. Rhodes Health and Physical Education Building (classrooms, the main gym, an indoor running track, a multi-purpose room, and four teaching station areas), Memorial Hall (classrooms, as well as large and small gyms), Ocasek Natatorium (a classroom, a swimming pool, nine racquetball courts, and a weight room), and Lee Jackson Field (14 tennis courts, an outdoor running track, and two softball fields). Each of these facilities and resources is used in the presentation of our undergraduate academic programs.

The **Department of Curricular and Instructional Studies** includes both the areas of secondary education and elementary education. Instruction in secondary education prepares students for teaching careers at the middle, junior, and senior high school levels in various academic and vocational subject fields. Initial teacher preparation programs are available at the undergraduate, postbaccalaureate, and master's degree levels. The department also offers the Technical Education degree, which prepares students for teaching/training and other personnel positions at the postsecondary level and for business and industry settings. Instruction in elementary education uses those strategies appropriate for the Pre K-8 child in the teaching-learning situation as the basis for its broad offering of courses in the

disciplines of language literacy, mathematics, social studies, science, and art. Emphasis is given to higher-level thinking skills and the integrated curriculum. A reading center, mathematics lab, and art lab facilitate the instruction of preservice teachers. The University Center for Child Development, directed by department faculty, provides day care for children while serving as an experiential learning site for teacher education students.

The **Department of Counseling and Special Education** incorporates three divisions: Counseling and School Psychology, both graduate programs, and Special Education, which prepares undergraduates as teachers for children with special needs and graduate students to be master teachers and supervisors of special education programs. The department operates a multidisciplinary clinic, the Clinic for Child Study and Family Therapy.

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## College of Engineering

The **College of Engineering** has five engineering departments offering bachelor's, master's, and doctoral degrees: Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering. These departments are located in the Auburn Science and Engineering Center, Olson Research Center, and Whitby Hall. The college also has a bachelor's degree program in construction technology. All undergraduate degree programs are fully accredited by ABET. Extensive instrumentation, computers, and specialized equipment support hands-on experimentation for undergraduates as well as fundamental and applied research at the graduate level. The college maintains a centralized engineering computer graphics facility and a centralized machine shop that provides fabrication support for undergraduate and graduate projects. The engineering cooperative education program is one of the oldest and largest in the country, annually placing nearly 600 students with more than 100 companies nationwide.

The **Department of Biomedical Engineering** has nine major laboratories for instructional and research use. The biomechanics laboratory is equipped with materials testing equipment and finite element analysis capabilities. The image science laboratory has an instrumentation for production and analysis of various imaging devices. The image processing laboratory is built around Sparc workstations, two of which are equipped with image processing accelerators. Image processing and display software and a large database of medical images are available for students to use in individual research and class projects. The human interface laboratory conducts research in virtual reality, telemanipulation, biofeedback therapy, and minimally invasive surgery. The rehabilitation engineering laboratory is equipped to conduct collaborative research on problems related to stroke, head injury, and arthritic patients. The biomedical instrumentation laboratory has continuous wave and doppler ultrasonic equipment, surface temperature devices, and blood pressure and flow monitoring equipment. The biomedical modeling and control laboratory focuses on the interplay between modeling, system identification, control theory, physiology and neurobiology for physiological systems analysis and control. The laboratory has a variety of computer hardware and software and computer controlled IVAC volumetric infusion pumps. The vascular dynamics laboratory provides facilities to analyze blood flow using laser doppler anemometry and doppler ultrasound techniques. The motion analysis laboratory studies all aspects of human movement (body motion, joint forces and moments, and muscle activity). The laboratory is equipped with a Vicon Motion Analysis System, two AMTI force plates, a MA-100 EMG system, and associated computer hardware and software. The biostereometrics laboratory is equipped to perform spatial analysis using three-dimensional sensing technology, which includes a Kern-Maps-200 Digitizing System and a JK Laser Holographic camera for laser interferometry.

The **Department of Chemical Engineering** possesses a variety of modern research equipment. The Particle and Catalyst Characterization Laboratory has a Quantasorb surface area analyzer, a flow BET unit, a temperature programmed chemisorption and desorption unit, and a mercury intrusion porosimeter.

The Process Research and Development laboratories have nine microplot plants for diverse chemical process applications, element analyzer, sulfur analyzer, automated chlorine analyzer, coulter particle counter, ash fusion analyzer, TGA/DSC, oxygen bomb calorimeter, Tilt-A-Mix reactor, FTIR, CDS Automated Microplot Plant, ICP, and four fermenter systems.

The Chemical Reaction Engineering laboratories have 14 high pressure reactor systems that are currently being used for various chemical reaction studies, including oxygenated fuels, polymerization, coal liquefaction, supercritical reactions, etc. An in-situ IR-based reactor is controlled by an on-line computer and is very efficient for mechanism studies. A slurry-reactor, microplot plant operates in a three-phase catalytic mode and is ideal for carrying out various fundamental and engineering studies on three-phase catalytic reactions. A gas chromatography/mass spectrometer is available for product stream analysis.

The Applied Colloid and Surface Science Laboratory has a state-of-the-art laser light scattering facility including a Lexel argon-ion laser, a vibration isolated optical bench, a Brookhaven correlation and probability analyzer, and an IBM PC-based data acquisition system.

The focal point of the undergraduate laboratories is the Corning Glassplant 6-inch and 12-inch distillation unit, which includes a 12-plate bubble-cap column and an 8-foot high packed-bed column. The unit is 24 feet high. There is also a pilot plant with a 5-gallon agitated reactor and a packed-column stripping facility. The laboratories also include a fluid flow measurement experiment and heat transfer study systems.

The Department of Chemical Engineering has an undergraduate computer and ASPEN laboratory which also provides students self-study areas as well as excellent on-line computer access.

The **Department of Civil Engineering** has five major laboratories. In the environmental engineering laboratory, students learn to analyze water and wastewater to assess its quality and to determine the most effective treatment techniques. Laboratory equipment includes UV-visible spectrophotometers, respirometers, a gas chromatograph, a toxicity analyzer, and a total organic carbon analyzer. Water and wastewater analytical kits and specialized meters are also available for field studies.

The Wendell Ladue undergraduate computer room is equipped with personal computers and associated facilities for the use of civil engineering students for both class and personal use.

In the hydraulics laboratory a tilting flume enables the student to visualize water flow in streams and rivers. Models of bridges and dams can be studied; the wave tank enables a student to study the effect of waves on lake shore erosion, harbors, breakwaters, and off-shore structures; the mobile bed tank is used to demonstrate erosion and sediment deposition patterns around bridges, piers, and culvert and storm drain outlets.

In the soil mechanics and foundation engineering lab, a student learns how to analyze soil by a variety of tests and equipment to determine shear strength characteristics, compaction characteristics, and seismic and electrical resistivity equipment for geophysical exploration of soil and rock deposits.

In addition to the standard equipment for routine testing, the laboratory has a computer-controlled cyclic triaxial testing system, pneumatically loaded consolidometers, flexible wall permeameters, a portable static/dynamic cone penetrometer, a pile-driving analyzer, and capability for ground vibration monitoring and analysis.

In the structural materials laboratory the opportunity to observe experimental verifications of earlier training on the behavior of structural members subjected to tension, compression, bending, and torsion is accomplished with the use of three universal testing machines, an MTS closed-loop system which has a loading capacity to 100,000 pounds, and two Instron dynamic testing machines which can be used in either uniaxial or torsional loading.

The **Department of Electrical Engineering** maintains a broad range of measurement, electronics, control/robotics computer, digital electronics, signal processing, microwave/transmission line, optics, and machinery laboratories.

**Measurement and Electronics Laboratories:** Students learn to do basic electrical measurement and to design simple electronic circuits and instruments. The equipment includes oscilloscopes, transistor curve tracers, and an assortment of voltmeters, ammeters, and wattmeters.

**Control/Robotics Laboratories:** There are analog computers for control system simulation and programming, and digital computers for interfacing with the controlled systems. A variety of robotic devices and systems are also available for robotic control and robotic vision study.

**Computer Laboratory:** A number of personal computers are available for instructional and research purposes.

**Digital Electronics Laboratory:** Several Intel and Hewlett Packard microcomputer development systems are available for digital prototype design, emulation, and debugging work.

**Signal Processing Laboratory:** There are computer systems with digitizing, computing, and signal reconstruction capabilities. An anechoic chamber and a Kay digital sonograph are also available for signal recording and analysis.

**Microwave/Transmission Line Laboratory:** Students perform the experiments on the basics of wave guide, transmission line property, and wave propagation.

**Optics Laboratory:** There is an optics table, laser, and holograph apparatus.

**Machine Laboratory:** Students learn the operating principles of generator and motors, and perform motion control experiments; the laboratory is equipped with an assortment of motors, generators, and motor starters.

The **Department of Mechanical Engineering** maintains laboratories in the Auburn Science and Engineering Center for undergraduate instruction and graduate instruction and research. These include:

**Thermal and Fluid Science Laboratory** with internal combustion engines, a supersonic wind tunnel, and a subsonic wind tunnel.

**Heat Transfer Laboratory** with thermal conductivity, radiation and temperature measurement systems, a gas laser and a spectrum of heat exchanges.

**Mechanical Measurements Laboratory** with a complete complement of transducers, calibration equipment and standards, signal conditioners, analog recording devices and microprocessor-based digital data acquisition systems.

**Materials Testing Laboratory** with computer controlled servohydraulic structural testing machine and a uniaxial universal testing machine for performing static, quasistatic, cyclic, and dynamic tests on a spectrum of engineering materials, and several types of hardness testing equipment.

**Experimental Mechanics Laboratory** with photoelastic strain measuring equipment and associated facilities, coupled with a complete range of strain gage instrumentation for both static and dynamic measurements.

**Mechanical Design Laboratory** with several major software packages for computer-aided design connected to the University's engineering computer graphics facility.

**System Dynamics and Controls Laboratory** composed of several microprocessors, analog computers, and digital control, as well as equipment for process control and robotics.

**Vibration and Acoustics Laboratory** with electromechanical shakers, sound pressure level instrumentation, and frequency spectrum analyzers for modal analysis.

**Metallography and Failure Analysis Laboratory** with a complete set of metallographic instrumentation for microstructural analysis of both conventional and advanced engineering materials, and electron microscopes for analysis of failure.

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## College of Fine and Applied Arts

The mission of the **School of Art** is to provide a high-quality undergraduate professional education in the visual arts. Its mission is also to define and encourage excellence within a diverse student body and to offer expertise and resources as artists to the community. The School of Art's studios and classrooms are housed in a contemporary, 67,000 square-foot building, which features photographic studios and darkrooms for black-and-white and color; a metalsmithing/jewelry laboratory offering casting, fabricating, and anodizing equipment; a printmaking workshop; a ceramics studio equipped for throwing and handbuilding; and a sculpture shop equipped for construction with wood, metal, clay, plaster, stone, as well as foundry work. The graphic design facilities include technology current in the design industry, including Macintosh-based computer systems, typographic, photostat, pre-press materials, on-site color copying, and access to photo studios and darkrooms. The computer imaging area provides visual computer experience using Macintosh computers, three-dimensional modeling, animation, and advanced paint systems in two complete lab settings. The School provides students with a solid background in art history supported by a collection of more than 65,000 slides. The University Galleries, including the Emily Davis Gallery, Bierce Library Gallery, and the Guzzetta Hall Williams Atrium Gallery, display staff-curated national and regional exhibitions as well as student and faculty work, host traveling exhibitions, and maintain a program of catalog publications.

The **School of Communication** features a television classroom/studio equipped with color cameras, and a wide complement of supporting audio and video equipment including graphics generators and computer-assisted editing. Portable video and audio equipment is available for location use. There is an audio recording facility with multitrack capability in Guzzetta Recital Hall. Radio facilities, located in WZIP-FM, include control consoles, turntables, tape machines, microphones, production studios, and newsrooms. A multimedia production/editing laboratory-classroom supports class instruction. News, publications, and other writing classes have access to a Macintosh computer laboratory with complete desktop publishing layout, graphics, and print capabilities. The school works in cooperation with local professional agencies in a strong internship program.

The **School of Communicative Disorders** provides preprofessional and professional training to students who wish to become speech-language pathologists and/or audiologists. The department houses the Speech and Hearing Center, which functions as a practicum training arm as well as a service agency for persons in the Akron community who have speech, language, or hearing problems.

The **School of Dance** is located in the Ballet Center. The activities in the building include the undergraduate dance programs for the B.A. and B.F.A. degrees, Musical Theatre Degree-B.F.A. in Dance, K-12 Certification Dance courses, dance minor, the Dance Institute for students ages 8 to 18, continuing education for adults, and the Ohio Ballet. There are five studios, each with mirrors, barres, sprung marley floors, and pianos. There is also an athletic training room with a graduate assistant athletic trainer and a jacuzzi. All offices for the dance faculty, staff, and Ohio Ballet are located within the Ballet Center. Annual performances are held in the Ballet Center Stage Studio Theatre, the intimate University Theatre (Kolbe Hall), and the E.J. Thomas Performing Arts Hall. The University of Akron is an accredited member of the National Association of Schools of Dance.

The **School of Home Economics and Family Ecology** has food and nutrition laboratories, textile conservation and clothing laboratories, an interior design and drafting laboratory, and a multipurpose lecture/laboratory area. These specially equipped areas are designed for demonstration and study in the areas of home

management, equipment, home computers, consumer education, housing, interiors, home furnishings, and community involvement. Additionally, the school maintains an executive conference room, and a graduate and teaching assistants' office. In cooperation with the College of Education, the school also operates and maintains a completely equipped nursery school facility for the study of child development and for teacher education.

The **School of Music** is housed in Guzzetta Hall and also utilizes the E.J. Thomas Performing Arts Hall. Guzzetta Recital Hall seats 250 and is equipped with a pipe organ, harpsichord, two concert grand pianos, and a recording booth. The Music Computer Center is equipped with Macintosh computers and MIDI/sound and video equipment. An electronic music studio features digital and analog multitrack recording and sound synthesis equipment for music composition. Classrooms, studios, and 40 practice rooms (acoustical sound modules) are used for teaching, rehearsals, and practice.

The **School of Social Work** offers CSWE-accredited professional training to social work students by linking them to a variety of local health and human services community agencies and organizations. The strong commitment and interaction with a network of agencies in the community serves as a laboratory for students.

The **School of Theatre Arts** utilizes three different performing spaces to present its annual season of four to six productions. Guzzetta Hall houses the versatile "black box" experimental Sandefur Theatre as well as rehearsal, teaching, and shop facilities. Kolbe Hall is the site of the 244-seat University Theatre, complete with support facilities. The conventional proscenium theatre is the home of theatre productions as is the multipurpose E.J. Thomas Performing Arts Hall. Student productions are performed in Studio 28, Sandefur Theatre, and Kolbe Theatre.

## College of Nursing

The **College of Nursing**, housed in Mary Gladwin Hall, provides professional nursing education at the undergraduate and graduate levels. The college is approved by the Ohio Board of Nursing, and all programs are fully accredited by the National League for Nursing. The college has a Student Affairs Office which provides academic advising services to prospective students. The college houses a state-of-the-art Learning Resource Center, including a computer laboratory and the Center for Nursing, which is used by faculty and students for practice and research.

The undergraduate nursing curriculum is a six-semester clinical sequence after completion of University and college prerequisite courses. The undergraduate program offers the basic B.S.N. program and sequences for licensed practical nurses and registered nurses who wish to obtain the B.S.N. degree. The graduate program prepares nurses in the functional areas of education, administration, and/or advanced practice. Areas of specialization include child and adolescent health nursing, adult health nursing, liaison-community mental health nursing, gerontological nursing and nursing anesthesia. There is also a sequence within the graduate program for registered nurses from associate degree and diploma programs to obtain a master's degree.

Students at all levels have clinical experience in a variety of settings including hospitals, clinics, rehabilitation agencies, long-term care facilities, community health agencies, mental health agencies, pediatric agencies, and home care settings.

## College of Polymer Science and Polymer Engineering

The **College of Polymer Science and Polymer Engineering** offers only graduate degrees leading to the Master of Science and Doctor of Philosophy in both Polymer Science and Polymer Engineering. In addition, there are elective courses in both polymer science and polymer engineering for undergraduate science and engineering majors. Options which emphasize polymer engineering have been developed with the **College of Engineering** through the Departments of Chemical Engineering and Mechanical Engineering for undergraduate students interested in the polymer industry.

The facilities of the **Department of Polymer Science** and the **Maurice Morton Institute of Polymer Science** support fundamental and applied research in polymer chemistry, physics, and many aspects of polymer behavior. There are extensive laboratories for polymer synthetic chemistry and for the characterization of macromolecules and polymer morphology. The macromolecular modeling center provides state-of-the-art computer modeling capabilities for research, and provides a way to introduce chemistry students in local high schools to computer modeling. A minipilot plant facility is available to provide larger quantities of experimental polymers for studies of their rheology and mechanical properties. A nuclear magnetic resonance laboratory is maintained with several high-resolution instruments supervised by a professional staff. The applied research section of The Maurice Morton Institute of Polymer Science operates a variety of analytical and compounding/processing laboratories to serve the needs of industry and government agencies for a reliable source of polymer materials and data. The total value of major instrumentation and equipment housed in the polymer science laboratories exceeds \$6 million.

The **Department of Polymer Engineering** and **Institute of Polymer Engineering** maintain a broad-based range of processing, structural, and rheological/mechanical characterization apparatus. Processing facilities include unique blending/compounding facilities with five twin-screw extruders, a Buss kneader, and seven internal mixers including flow visualization capability; seven single-screw extrusion lines for plastics and rubber, with ultrasonic and sound waves and rotational mandrel dies, and with single/multiple bubble tubular film and cast film extrusion capability as well as a biaxial film stretcher; molding facilities including screw injection molding capability of five machines, blow molding, plug assist thermoforming and compression molding with composites capability. The Institute of Polymer Engineering is the home of the EPIC-M.A. Hanna Compounding and Blending Center and the Molding Technology Center. Characterization capability includes scanning and transmission electron microscopy, X-ray diffraction (including a rotating anode X-ray generator), Fourier transform infrared, small angle light scattering, optical microscopy and retardation, radiography, differential scanning calorimetry, thermogravimetric analysis, dielectric thermal analysis, and surface profiling, rheological and mechanical testing, including elongational flow, rotational and capillary shear rheometry, dynamic mechanical, tensile and impact testing.

## Information Services

The **Department of Information Services** is responsible for computing, network services, and telecommunications throughout the campus. The department is made up of three sections: Academic User Services provides computing support to academic research and instruction efforts. Networking Services provides support for all of the University's voice and data communications and networking, and Computer Services provides the mainframe hardware and software support for the University as well as applications development support for the University's administrative business. The majority of the department is located in the Computer Center at the west end of the central campus with portions of the networking and telecommunications groups located in the Union Building, the Lincoln Building, and Carroll Hall.

The Academic User Services section of Information Services provides support for academic and instructional computing and assists the student and faculty member in making effective use of the Computer Center. This section supports the acquisition and implementation of prepackaged programs for specific departments and provides consultation on problems requiring numerical analysis. The Computer Based Education and Testing (CB&T) group within the Academic User Services section develops and/or acquires specialized instructional programs. Many of these programs are tutorial in nature and are designed to assist the student in learning a particular idea or principle. The CB&T group also supports the Testing Center, which provides the capability for students to take course tests via a computer.

For mainframe computing, Information Services utilizes an IBM 4381-R14 running VM-HPO as the operating system and an IBM 3090-200 dyadic processor running MVS-XA. The IBM 4381-R14 is used by faculty and students for interactive computing and allows academic users to submit batch jobs to the IBM 3090-200 over a channel-to-channel adapter. The IBM 3090-200, in addition to being a shared processor for academic and administrative batch computing and administrative interactive computing, has a vector processor that does parallel processing in support of academic supercomputing. In addition to the two IBM machines, there is a DECsystem 5000/240 running Ultrix that is primarily used by Computer Science and Engineering.

The library has two Digital processors on the Computer Center platform, a DECsystem 5000/240 and a DECsystem 5900. Both processors are running the Innovative Interfaces Inc. library system and are part of the Ohio Library Information Network (OhioLINK).

All of the mainframe computers as well as many of the campus's microcomputer labs, faculty members' offices, and administrative offices are connected via Zippy's Internet Protocol network (ZIPnet). This is a high-speed data network available across campus which has a connection to OARnet, the statewide network. It provides access to Internet, the worldwide network, and the Ohio Supercomputer Center in Columbus.

Primary access to the mainframe computers is by work stations utilizing ZIPnet or by remote terminals. The peripheral equipment attached to the mainframes includes high-speed laser and impact printers, high-capacity disk drives, magnetic tape drives, a microfiche printer, and a voice-response system used for telephone registration. Plotting is supported using either a CalComp Pen Plotter or a CalComp Drawingmaster. An NCS OpScan 21-75 Optical Mark Sense Reader scans mark sense forms providing fast and reliable data entry for test scoring services, surveys, faculty evaluations, and payroll time cards. Information Services also supports widely used computer languages such as FORTRAN, C, COBOL, PL/1, BASIC, PASCAL, SAS, SPSS, and APL, and microcomputer packages such as Lotus, WordPerfect, dBase, and Harvard Graphics.



# 2

## Student Affairs

# Student Affairs

Charged with the responsibility of helping our diverse student body to maximize the total benefit that college offers them, the Division of Student Affairs provides services that promote the academic, social, cultural, personal and physical growth and development of the student. Sensitive to the changing needs of today's college student, this division is committed to helping students meet their individual academic goals.



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## ACADEMIC ADVISEMENT CENTER

The mission of the Academic Advisement Center is to maintain a commitment to:

- support and advise students of any age, gender, disability, race, and/or cultural differences on academic, career, and related matters respecting cultural differences
- create opportunities to assist students with various educational backgrounds in developing and achieving their educational goals and to effectively utilize the resources at The University of Akron and the surrounding community
- act as an advocate for the student in interpreting issues, policies, and procedures for the University
- communicate accurate and timely information to students by acting as a liaison between our department and other departments at the University
- participate in professional growth by teaching, research, administrative, and leadership activities

The Academic Advisement Center (AAC) offers a comprehensive array of services designed to assist students in attaining their personal, academic, and career goals. The service is available to all new and returning students, including adult, postbaccalaureate, special high school, and transfer students. The following represents a partial list of some of the issues students may wish to discuss with an adviser:

- Course selection and educational planning
- Changing majors
- Dropping and adding classes
- Clarification of academic procedures and policies
- Academic progress
- Career planning
- Course workloads and study habits
- Prescribing learning strategies for conditionally admitted students
- Transferring to a degree-granting college
- Referrals to other departments/services on campus

Academic advising is a continuous process of clarification and evaluation that exists between adviser and advisee. The role of the academic adviser is to assist students in identifying alternatives and working through the decision-making process.

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## ADULT RESOURCE CENTER

The Adult Resource Center (ARC) specializes in offering adults educational guidance, information and referral services, and assistance with career change and job-finding skills. Through support group sessions and individual guidance, people learn to assess their skills, abilities, and interests to maximize their academic potential and career choice. ARC helps individuals set personal, educational and career goals. It also serves as a training center for undergraduate and graduate students interested in adult development and career guidance, management, and communication.

The ARC is committed to the concept of "one-stop shopping" for adults interested in attending The University of Akron. Thus, the ARC holds "New Majority Student Information Sessions" for adults who wish to learn more about the University before making a decision to attend. These sessions are generally held six to eight times a year on Saturdays and/or Monday through Thursday evenings. In addition, adults may submit applications for admission, receive academic advising, and adult scholarship information within the ARC.

For further information, contact the Adult Resource Center at (216) 972-7448 or the Office of Admissions (216) 972-7100.

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## Sixty Plus (60+) Program

Sixty Plus (60+) students taking classes for audit are exempt from payment of tuition and general service fees. (State law 3345:27). However, Sixty Plus (60+) students are expected to pay for books, lab and instructional fees, and parking fees. (This tuition and general service fee exemption does not apply to non-credit Continuing Education courses.)

To be eligible for this program, a person must be 60 years of age or older and a resident of Ohio for at least one year. Under this program a person is entitled to audit credit classes on a space-available-only basis. Space availability is determined after the degree-seeking students have registered. Sixty Plus registrations are held immediately before the start of each term, and participants must register in person.

For further information regarding course selection, guidance, and/or registration, contact the Adult Resource Center at (216) 972-7448.

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## COUNSELING, TESTING, AND CAREER CENTER

In addition to participating with the Placement Office in the Career Development Service, the Counseling, Testing, and Career Center provides a wide range of psychological counseling, therapy, testing, and outreach and consulting services to the University community. The Center is located in 163 Simmons Hall. (216) 972-7082.

### Counseling Service

The Center's counseling service offers assistance in the following areas:

- Career counseling involves discovering one's interests, needs, values, aptitudes, abilities, and goals; relating these to the world of work; exploring appropriate major subjects and career fields. Occupational information is available through reference books and two computerized career guidance and information systems, SIGI and OCIS.
- Personal-emotional counseling deals, within a short-term framework, with feelings of loneliness, inadequacy, guilt, anxiety, and depression; harmful involvement with alcohol and drugs; recovery from acquaintance or stranger rape; interpersonal relationships, especially with the immediate family, intimate relationships, and roommates; personality development, identity, and self-esteem.
- Educational counseling relates to educational goals, motivation, attitudes, abilities, and the development of effective study habits and skills.
- Group educational programs cover a wide range of topics which typically deal with improving grades, reducing test anxiety, planning careers, increasing wellness, and addressing personal issues; as well as providing support groups for minority students and others with a variety of concerns. Brochures are available.

### Outreach and Consulting Service

The Center's outreach and consulting service offers assistance to the larger university community by providing programs and workshops for a wide variety of campus groups. The Center regularly provides speakers for classrooms, residence halls, student organizations, and administrative offices. Topic areas include academic performance, wellness, sexuality, and appreciating cultural diversity.

The Center's staff is also available for consultation and advice in understanding individual or group behavior using psychological theory and principles. In addition, the Center provides appropriate referral sources for social, psychological, and medical services.

### Testing Service

The Center's testing service offers a variety of testing programs including learning disability determination, advanced placement testing for course credit (CLEP), placement testing in mathematics, foreign language, reading and writing, and national testing programs. National testing includes pre-college tests (ACT, SAT, and OTSA), pre-graduate school tests (Millers Analogy Test, LSAT, GRE) and Education certification tests (PPST and NTE).

Individual psychological and career assessment is offered in conjunction with counseling. Tests cover such areas as vocational interests, aptitudes, achievement, personality, and assessment of psychological problems.

## GARDNER STUDENT CENTER

The Gardner Student Center, located in the center of campus, serves the students, faculty, and staff, and is one of the University's major assets in meeting the University-wide goal of public service. This busy facility houses four food service facilities, meeting rooms, lounges, Gardner Theatre, student organization offices, recreation facilities, the Communication Center, a bank, Ticketmaster/Film Center, and a bookstore.

- **Food Areas** in the Gardner Student Center offer a variety of food items. On the first level, the Chuckery features the services of a fast-food operation, a pizza & mexican shop, and an ice cream and yogurt shop. For more of a cafeteria-style offering, the Hilltop, on the second level, provides full meals, a salad bar, soup, and daily specials.
- **Gardner Theatre** operates Tuesday through Sunday with two showings of first-run movies each day.
- The **Game Room**, located on the lower level of the Gardner Student Center, is open seven days a week for the convenience of the University family to enhance free time activity. The Game Room offers eight bowling lanes, 16 billiard tables, foosball, and a variety of video games. For the competitive individual, tournaments in many of these recreational activities are programmed each semester by the Game Room staff.
- The **Communication Center**, located in the lobby of Gardner Student Center offers the following services: informational and referral services; copying, including color; oversized and reduced copies; binding of materials; mailing facilities for campus and U.S. mail; literature distribution; and class support files.
- The **Ticketmaster/Film Center**, located in the lobby of Gardner Student Center (216) 972-6684, sells tickets to most events in northern Ohio, including Blossom Music Center, the Coliseum, The IX Center, Playhouse Square, Public Hall, and the Stadium. Over-the-counter sales include tickets to campus functions, including sporting events, and to local shows. Film and film processing services are also available.
- **The Bookstore at The University of Akron** is operated as a service of Barnes & Noble Bookstores, Inc. of New York City. Barnes & Noble operates 300 other college stores. The primary purpose of the Bookstore is to make available books and supplies required for course work. In addition, the store also carries a wide range of classroom supplies, paperbacks, engineering and art supplies, greeting cards, University memorabilia, clothing and other sundry items.



## PLACEMENT SERVICES

The Office of Placement Services has as its primary mission to assist the graduating student's initiative in seeking employment and to assist all students in obtaining part-time employment both on-campus and off-campus. The office combines the University's Placement, Cooperative Education, Student Employment, Job Location & Development, and Volunteer Programs. These programs assist students in preparing for their job search, obtaining pre-professional, experiential education assignments, and entering the job market upon completion of their degree. Additionally, Placement Services is a part of a cooperative effort with the Counseling and Testing Center to provide for the comprehensive career development needs of students. These programs and services are described on the following page under Career Development Service.

### Placement Services

Placement Services for graduating students include on-campus interviews with representatives of businesses, industries, education, branches of the government and military. In addition, workshops are offered on Resume Writing, Cover Letters, Interviewing Skills, and the Self-Directed Job Search throughout the fall and spring semesters. Personal career advising may be scheduled with placement advisors. A reference library of employer literature is also available. Other services to registrants include direct job referrals and the maintenance and distribution of students' credential files.

### Cooperative Education

These programs combine classroom learning with paid work experience. Qualified students are placed in career-related preprofessional work assignments in industrial, commercial, professional, governmental, or service organizations. The programs enhance a student's education and career preparation by: integrating classroom theory with on-the-job performance; providing an understanding of work environments and professional requirements; testing career and professional goals; developing confidence, maturity, and skills in human relations; and establishing professional contacts and interests.

Students are typically eligible for work assignments if they are in good academic standing, have completed half of their academic requirements, attend an orientation program, and are accepted by the cooperative education coordinator in their respective fields. Additional standards may be required by some departments or employers. Final hiring decisions are made by the employers.

Students and employers participating in cooperative education are subject to all federal, state, and local labor laws. Additionally, students on work assignment must abide by all the rules and regulations of the participating employer and of cooperative education. Participating students are recognized as full-time students at The University of Akron when working on an approved cooperative education field assignment and when complying with the rules and regulations of the cooperative education programs.

The Cooperative Engineering Education Program is located in Auburn Science and Engineering Center 203, (216)972-7818. The University-wide Cooperative Education Program is in Simmons Hall 178, (216)972-6722.

### Student Employment

Student Employment assists students in finding part-time employment opportunities on campus. These positions may or may not relate to students' career goals and are designed to allow the students to work around their academic schedules.

The Student Employment Office is located in Simmons Hall 178.

### Job Location & Development

The Job Location & Development Program exists to assist students in locating off-campus part-time employment. By working part-time, students are able to gain some valuable work experience and to earn money to assist with college expenses. Part-time jobs are posted in glass display cases in the Office of Placement Services Center in Simmons Hall, and in the Gardner Student Center.

### Student Volunteer Programs

Student volunteer programs seek to recruit and refer student for volunteer positions with social service and nonprofit agencies in Northeast Ohio. Volunteering offers students a wealth of experience which will enable discovery of the reality of American life in ways that cannot be as graphically communicated in the classroom. In addition, the rendering of public service by student volunteers will help them: develop an understanding of professional requirements and their role as truly educated citizens; enhance their educational experiences; give concrete form to the abstract learning of the college curriculum by applying it to immediate human needs; and know that a truly successful life must include helping others.

Students who are in good academic standing may participate in the program's volunteer activities. Students are also expected to respect the rules and regulations of their volunteer agency. The Student Volunteer Program is located in the Office of Placement Services in Simmons Hall.

## CAREER DEVELOPMENT SERVICE

The Career Development Service is a cooperative effort of the Counseling, Testing, and Career Center and the Office of Placement Services.

### Major Objectives

- To provide specialized services for students to help them:
  - explore, clarify and assess their interests, values, needs, abilities, and personality characteristics;
  - understand broad career areas and specific occupations;
  - decide on a career direction and an appropriate educational program;
  - develop lifelong decision-making skills.
- To provide services to students who have made a tentative decision regarding their career direction to help them:
  - reassess their interests, aptitudes, needs, educational, and experiential backgrounds as well as their desired life-style to clarify, reevaluate or reinforce their choice;
  - sharpen decision-making skills;
  - apply this knowledge to the realities of the world of work through experiential education;
  - develop lifelong job-seeking skills.

### Services

- Individual counseling for career and life planning.
- This individualized approach provides a systematic, in-depth exploration of self and the identification of possible career alternatives.
- Interest, aptitude, personality, and values testing for career and life planning.
- A wide range of vocational and psychological tests and inventories are available for self-assessment in individual and group counseling.
- Career and life-planning groups. Groups usually meet for three or four one-hour sessions using the self-assessment career planning approach.
- "Puzzling Your Career" workshops. This is a well-developed and flexible approach to career planning especially useful for the nontraditional student.
- SIGI - a computerized system of interactive guidance and information. SIGI is a computer program designed specifically to help college students make rational and informed career decisions.
- OCIS - computerized Ohio Career Information System. OCIS is a computer-based information system designed to provide access to state and national data regarding occupations, educational institutions, and financial aid.
- Career library. In addition to standard references, general and specific information is available about career opportunities with hundreds of companies, government agencies, and school systems in Ohio and throughout the country.
- Career advisement and consultation. Information and consultation is available about various career fields and their requirements, as well as about job outlooks, salaries, job hunting skills, and University of Akron alumni follow-ups.
- Workshops on interviewing skills, resume writing, and job hunting skills. These are practical how-to sessions that deal with a topic in a clear, concise, informative manner.
- Student Employment. Student employment assists students in finding short-term, part-time employment opportunities both on and off campus.
- Experiential Education. Cooperative education work assignments provide eligible students with the opportunity to apply the theory learned in the classroom, prescreen career choices, develop professional skills and competence, and earn a reasonable income.
- Student Volunteer Programs. Student volunteer programs seek to recruit and refer students for volunteer positions with social service and nonprofit agencies in the Akron and Northeast Ohio area.
- Interviews with employers. Campus interviews with representatives from business, industry, government, and private organizations are scheduled throughout the year.

- Contacts. Names of people to contact within organizations and addresses and locations for all types of employment are available.
- Current job opportunities. Employers regularly notify the Placement Services of current positions available.
- Computerized job matching. A computerized system matching jobs to students or alumni registered in the placement service is in operation. This will facilitate information-flow between employers and potential candidates for employment.

You are invited to contact the Career Development Service to take advantage of any of the services described. This contact may be made through the Counseling, Testing, and Career Center, Simmons Hall 163, (216) 972-7082; or the Office of Placement Services, Simmons Hall 178, (216) 972-7747.

## RESIDENCE HALLS

Through the Office of Residence Halls, the University provides comfortable and safe living accommodations for the non-commuting student. The residence hall program is committed to providing a living/learning experience that contributes to the educational, social, and personal development of each resident student.

The Office of Residence Halls, located in Bulger Hall 109, supervises and manages ten on-campus residence facilities housing approximately 2,200 students.

The University is pleased to be able to house students interested in living in campus residence halls. Space is available to the most qualified freshman applicants based on high school grade-point average, test scores, and completion of the core curriculum. It is important to note that in years past the demand for residence hall space has exceeded that which was available. Students requesting space in the residence halls are encouraged to apply for admission early.

After applying for admission, qualified students will receive a Contract for Housing Accommodations and Food Service. This Contract must be returned with a \$150 deposit to reserve a room. The deposit is refunded for cancellations received before May 15; the deposit is forfeited for cancellations after that date.

Living in each hall is a full-time staff person, a Hall Director who is a graduate student; and selected upperclass students, resident assistants (RAs), who are assigned to each floor. Most of the halls are fully air-conditioned and offer a variety of room styles, ranging from traditional, two-person rooms to rooms/apartments that have greater occupancy and include private bathroom facilities. A limited number of guaranteed singles are available in the north quad at an additional premium rate. Rooms are furnished minimally with a bed, desk, desk chair, clothes storage, limited lighting, a telephone, and window drapes. Most students find they want to augment that which is provided with their own furnishings.

The residence halls have coin-operated washers and dryers as well as public lounge and study areas. A resident may have a car on campus, but must purchase and display a student parking permit. Residents are not permitted to have pets.

### Robertson Dining Hall

A student who lives in the residence halls must participate in a board plan. A residence hall occupant receives a meal card, which is not transferable, entitling the holder to meals according to one of the available board options.

### Cost: Room and Board

The current rate for housing accommodations and food service is \$4,062 per year (\$2,031 per semester).

Housing is also available during the summer on a limited basis. The charges are: per night, \$9.00; per session, \$288; and for the entire summer school period, \$576. Summer session prices reflect the cost of room only. A student is responsible for meals.

In the event surplus space becomes available in University residence halls, the University shall enforce a rule requiring occupancy of facilities by students attending the University.

### Residence Hall Program Board (RHPB)

RHPB is a student-operated programming organization that provides a variety of social activities for residence hall students. RHPB's six standing committees Major Events, Music and Comedy, Telecom, Publicity, Technical and Special Features sponsor an array of activities such as Residence Hall Orientation, Little Sibs Weekend, Hall Fest, dances, miniconcerts, contests, talent shows, movies, and trips to sports events. RHPB was named best program board in its division by the National Association for Campus Activities.

## Residence Hall Student Council

Residence Hall Council (RHC) is the major governmental body for residence hall students. The purpose of RHC is to facilitate communication among students, faculty, and administration; to provide services for the residence hall community; and to plan educational and recreational activities to enhance residence hall living.

RHC consists of executive officers and representatives from each individual residence hall. Each residence hall has its own hall government responsible for supporting and enriching hall environment and sponsoring group activities for its residents.

University Residence Halls	Number of Residents
Bulger Hall (men) 265 Buchtel Common	476
Gallucci Hall (men and women) 200 E. Exchange Street	449
Grant Residence Center (men and women)	268
Highrise (women) 151 Wheeler Street	262
Townhouses (men and women) Sherman and Grant streets	153
Orr Hall (women) 188 S. College Street	118
Ritchie Hall (women) 269 Buchtel Common	92
Sisler-McFawn (women) 211 E. Center Street	122
Spanton Hall (women) 190 S. College Street	306
Richard S. Garson Hall (men and women, special assignment) 282 Torrey Street	29
Brown Street Hall (men) 333 Brown Street	136
<b>Private Residence Halls</b>	
Berns Hall (women) 503-505 Vine Street	106
Concord Hall (women) 389 Sherman Street	35
Ellis House (graduate men and women) 195 Wheeler Street	53
Joey Hall (men and women)	118
Judson House (graduate men and women) 437 Sumner Street	51
Wallaby Hall (men and women) 323 Brown Street	116
Wallaro Hall (men and women) 420 Vine Street	164
<b>Private Apartment Type Halls</b>	
Glenville House (men and women) 478 Orchard Street	
Sherman House (men and women) 417 Sherman Street	
Sumner Hall (men and women) 430 Sumner Street	

## STUDENT ASSISTANCE CENTER

The Student Assistance Center is designed to help students make the most of their opportunities at The University of Akron. The Center provides a place to find information, discuss ideas, do some planning, and get some support. Students can ask any question and expect to get information and help. In addition to these general services, the Center places special emphasis on:

- the needs of commuter students – both traditional age and New Majority.
- education concerning gender issues – preventing sexism, heterosexism, harassment, and acquaintance/date rape.
- education to reduce the use of alcohol and drugs through the C.A.R.E. Program.
- services for students with disabilities through the Office of Services for Students with Disabilities.

### C.A.R.E. Program

The University of Akron's Chemical Abuse Resource Education (C.A.R.E.) Program has been established in order to educate and impact the University Community so that healthier decisions can be made about the use of alcohol, drugs, tobacco and other wellness issues. The C.A.R.E. Program is located in 120 Spicer Hall, (216) 972-5653.

The C.A.R.E. Program offers the following services:

- Resource Library which houses books, articles, brochures, and films pertaining to alcohol/drugs, stress management, date rape, and several wellness issues.
- Provides programs/workshops on alcohol/drug and wellness issues.
- Provides initial consultation and appropriate referrals.
- Provides a listing of support groups such as AA, ALANON, etc.

### Services for Students with Disabilities

According to provisions outlined in Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, students with disabilities are ensured equal access and reasonable academic adjustments and accommodations by institutions of higher learning.

The Office of Services for Students with Disabilities is part of the Student Assistance Center in the Division of Student Affairs. It is the responsibility of this office to provide students with disabilities the necessary services that will ensure the opportunity for full participation in University academic programs, activities, and services.

If a student has a specific disability, he or she should contact the Office of Services for Students with Disabilities, Spicer Hall 124, (216) 972-7928 (Voice), or (216) 972-5764 (TDD).

## STUDENT FINANCIAL AID

This office serves students who may need financial assistance to attend the University. Seven professional staff members provide information on available aid programs.

A detailed statement regarding all financial assistance programs can be found in **Section 3** of this Bulletin.

## STUDENT HEALTH SERVICES

Health service facilities are located in Robertson Dining Hall, immediately adjacent to the residence halls. This facility is capable of handling most acute illnesses and injuries. Sick call hours are 9:00 to 11:30 a.m. and 1:00 to 2:30 p.m., and 6:00 to 7:00 p.m. most evenings (call first for evening service).

The student who becomes seriously ill or suffers a serious injury on campus should be taken to an emergency ward of one of the local hospitals without delay. Those persons present in this kind of emergency should call University Police or 911 immediately. The University assumes no legal responsibility or obligation for the expenses of such transportation or for medical services at the hospital.

Student Health and Accident Insurance, designed specifically for students, is required of all residence hall students and all international students except those

who present proof of similar coverage. Other students may purchase this insurance at the annual individual rate. The student insurance provides coverage for such items as hospitalization, surgical benefits, and in-hospital medical benefits.

To identify existing or potential health problems, a Health History Profile form and Immunization Record form are included in the packet containing other admission forms and information. Explanations for completion and mailing of this form are included. Completion of this form is essential.

The completed health form and other health-related records are treated as confidential and are kept in the Student Health Services offices.

## STUDENT DEVELOPMENT

Student Development is concerned with each student's University experience outside the classroom, providing a wide range of programs, activities, resources, and professional assistance to afford students a full collegiate experience and to encourage their involvement in campus organizations and activities. Student Development serves as the central coordination point for major traditional campus events such as Homecoming, May Day, Parents'/Family Day, the Salad Bowl Celebration, the All Campus Leadership Conference, and the All Campus Recognition Dinner. In addition, Student Development coordinates the registration, funding, and development of 210 student organizations. The Student Development office, located in Gardner Student Center 104, has current information about registered student groups, fraternities and sororities, as well as current procedures for student organizations and the process for registering new groups. In addition, the office advises registered student groups about planning programs, promoting events, recruiting and retaining members, managing budgets, and many other organizational skill areas.

The Student Development staff assists as advisers to Interfraternity Council, Panhellenic Council, Greek Programming Committee, and Associated Student Government.

## STUDENT CONDUCT

The disciplinary power of the University is inherent in its responsibility to protect its educational purposes and processes through the setting of standards of its conduct and scholarship for its students and through the regulation of the use of its facilities. The established standards of conduct apply to students whenever they are on property owned, leased, or operated by the University. Students are also expected to abide by applicable federal, state, and local laws. The University assesses penalties for violation of its own regulations; however, the students are subject to public laws which the University Police officers (among other law enforcement agencies) are empowered to enforce on property owned, leased, or operated by the University. Such public laws include the Revised Code of the State of Ohio, and ordinances of the City of Akron, which contain regulations relating to disorderly conduct, theft, assault, arson, damaging property, sex offenses, the use of drugs, hazing, and mob action. All students are advised to become aware of the disciplinary procedures published in the University Rules and Regulations Concerning Campus Conduct and Student Discipline Procedures available in the Student Development office, Gardner Student Center 104, (216) 972-7021.

### Definition of Student Misconduct

The University of Akron defines student misconduct as behavior on property owned, leased, or operated by the University, that violates codified or explicitly stated University rules and regulations. Minor penalties may be assessed informally under prescribed procedures\*, but the types of misconduct described below may result in the penalties of formal probation, suspension, or dismissal. Student misconduct includes:

- A. Plagiarism, cheating, or other forms of academic dishonesty.
- B. Furnishing false or misleading information to University officials or on official University records, or altering or tampering with such record.
- C. Detaining, holding, intimidating, injuring, threatening injury or threatening to injure or coerce by bodily harm any person lawfully upon property owned, leased, or operated by the University or in housing occupied or used by recognized University student groups.

\* Procedure for assessment of Minor Penalties Relative to Minor Incidents of Academic Dishonesty

A student alleged to have committed a minor incident of academic misconduct may, if the student so desires, have the matter resolved and minor penalty assessed in confidential session with the respective faculty member and department head. The resolution thereof and minor penalty assessment shall, if agreed upon, be reduced to writing and executed by the student and department head in which the course was offered. However, in the event the student disagrees or the faculty member or department head do not concur with informal resolution or minor penalty, then the matter shall be resolved in accordance with the regular student disciplinary procedures. For more information about University policies regarding Academic Dishonesty, refer to Section 3 of this Bulletin.

- D. Theft, malicious destruction, damage or injury to property not his/her own.
- E. Appropriating for his/her own use property not his/her own without the consent of the owner or person legally responsible for it.
- F. Possession, use or distribution of marijuana or any narcotic, hallucinogenic, or other drug in either refined or crude form which is prohibited by law.
- G. Unauthorized consumption, possession, or distribution of alcoholic beverages.
- H. Gambling or games of chance as defined in the Revised Code of the State of Ohio and ordinances of the City of Akron.
- I. Illegal or unauthorized possession or use of firearms, explosives or other weapons.
- J. Offenses defined as felonies or misdemeanors under the Revised Code of the State of Ohio and ordinances of the City of Akron.
- K. Unauthorized entry into, or use of, University facilities.
- L. Active or passive, willful or deliberate obstruction, disruption, or occupation of building entrances, walks, stairways, passageways, approaches, classrooms, offices, parking areas, auxiliary rooms (power, telephone, etc.), or any other space that impedes implementation of authorized programs and functions of the University.
- M. Violation of University regulations prohibiting dogs, other animals, fowl, or reptiles on property owned, leased, or operated by The University of Akron.
- N. Unauthorized copying of an assignment in computer programming, unauthorized examination or view of the computer accounts for unauthorized persons, engaging in disruptive, mischievous behavior on the computer, or any other wrongful use of a computer.
- O. Doing any act or coercing another, including the victim, to do any act of initiation into any student or other organization that causes or creates a substantial risk of causing mental or physical harm to any person.
- P. Failure to comply with directions of University administrative officers and police, or any other government law enforcement officers upholding University regulations, or faculty within the purview of their authority when carrying out their normal duties.

## UNIVERSITY LIBRARIES

Library facilities are housed in three separate locations: in Bierce Library on Buchtel Common; the Science Library is in Auburn Science and Engineering Center, Room 104; and Archival Services is in the Polsky Building, lower level.

Library services include reference and research assistance, user education, bibliographic instruction, and computer-based information searching. Materials can be borrowed from the University Libraries through the circulation department or obtained from other libraries through the OhioLINK network or other resource-sharing arrangements. Archival Services collects and makes available materials which have historical or other research interest and which relate primarily to The University of Akron, to an eight-county region in Northeast Ohio, or to American psychology.

The University Libraries' collections contain more than 2.8 million items: books, periodicals, government documents, curricular materials, microforms, maps, audio-visual materials, and archival documents. The library receives nearly 5,000 magazines, journals, newspapers, and other serial publications, such as annual reports and the publications of various societies.

Through the library's memberships in the Center for Research Libraries, the Ohio Library and Information Network, the Northeast Ohio Major Academic and Research Libraries consortium, the Online Computer Library Center (OCLC), and the Ohio Network of American History Research Centers, access to vast resources is greatly increased for University students, faculty, and staff.

University identification cards function as library cards. Photocopy services and equipment for use in making paper copies from microforms are available in Bierce Library and in the Science Library. Group study rooms and typing facilities are also in Bierce Library.

Audiovisual Services, located in Bierce Library, Room 63B, maintains an extensive centralized collection of media hardware and audio-visual resources for student and faculty use. It also has a collection of instructional materials in various media formats (filmstrips, slides, etc.) to supplement class-room instruction.

# Campus Safety and Security Information

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## SAFETY AND SECURITY

This information is provided as part of The University of Akron's commitment to safety and security on campus and is in compliance with the Federal Crime Awareness and Campus Security Act of 1990.

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## THE CAMPUS

The University of Akron is the third-largest university in Ohio with a main campus enrollment of 28,000 students from throughout Ohio, the United States, and more than 83 foreign countries. Within a 170-acre campus, the University now reaches into downtown Akron with the continuing renovation of the former Polsky's department store for classroom and office space.

The University employs many people to keep the campus safe and secure. The Division of Administrative Services provides for student and employee safety and security through the departments of Environmental and Occupational Health and Safety, Physical Facilities, and University Police. The Division of Student Affairs is responsible for security and safety policies governing residence halls, fraternities, and sororities and for teaching students about security and crime prevention.

It is the intent of the University to continue and enhance current safety and security education and awareness programs throughout the year. The purpose of these programs is to assure that the campus community frequently receives information and instruction on University crime and safety policies and procedures, and on drug and alcohol control and prevention.

A safe campus can be achieved only with the cooperation of the entire campus community. The University hopes students will read and become familiar with this material and be responsible for their own safety and the security of others.

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## UNIVERSITY POLICE

Campus law enforcement is primarily the responsibility of The University of Akron Department of Police. University police provide 24-hour-a-day patrol protection to the campus, parking lots, residence halls, and on-campus fraternity and sorority houses. The police station is located in the Physical Facilities Operation Center at the corner of Hill and South Forge streets and is staffed 24 hours a day by full-time dispatchers.

The University's 28 police officers are commissioned by the State of Ohio with full law enforcement authority and responsibilities identical to the local police or sheriff. The UA Police Department works closely with the Akron Police Department and other law enforcement agencies. Reports are exchanged every business day so that both agencies receive pertinent information. Information is shared through personal contacts and by phone and radio. University and City of Akron police regularly work together at large campus events such as athletic competitions and dances.

UA Police officers have met or exceeded the training standards of the Ohio Peace Officers Training Council. They also receive ongoing in-service and specialized training in first aid, CPR, firearms, defensive tactics, legal updates, and other skills.

UA Police officers enforce laws regulating underage drinking, the use of controlled substances, weapons, and all other incidents requiring police assistance. They also are responsible for public safety services such as crime reports, medical emergencies, fire emergencies, and traffic accidents.

It is the goal of every member of the University Police Department to promote, preserve, and deliver feelings of safety and security through quality services to the members of the University community.

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## DRUG AND ALCOHOL PREVENTION

The issue of drug and alcohol abuse concerns the entire University community as well as our surrounding neighborhoods. The federal Drug Free Schools and Communities Act Amendments of 1989 require schools, colleges, and universities receiving federal financial assistance to implement and enforce drug and alcohol prevention programs for students and employees.

The University of Akron prohibits the illegal use, possession, sale, manufacture, or distribution of drugs and alcohol by all students and employees on University premises or as part of any University activity. Any misuse of substances by University students and employees that presents physical or psychological hazard to individuals also is prohibited.

It is the responsibility of The University of Akron to adopt and implement a drug prevention program for its students and employees. The University as an institution, and each of us as individuals, must eliminate the use of illicit drugs and alcohol that contribute to the unrecoverable loss of time, talent, and lives.

In accordance with the Drug Free Schools and Communities Act Amendment of 1989, The University of Akron established the Chemical Abuse Resource Education (C.A.R.E.) Center. The C.A.R.E. Center is funded in part by the Fund for Post Secondary Education, U.S. Department of Education. To receive resource, speaker and or program information, call 972-5653 or stop by Gardner Student Center 210.

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## CRIME PREVENTION

Through the Office of Crime Prevention, University police officers provide educational programs to students and employees on personal safety, sexual assault/acquaintance rape prevention, drug and alcohol abuse prevention, and related topics. The University Police Department welcomes the chance to talk with any campus group. Candid dialogue between UA Police and the public has created greater confidence in the community to report unlawful activities.

Potential illegal actions and on-campus emergencies can be confidentially reported by any student, faculty, or staff member. Complaints received by UA police which fall outside their jurisdiction will be referred to the appropriate agency, or the complainant will be provided a phone number where the complaint can be filed. Likewise, other agencies refer complaints to University Police when appropriate.

Two police officers patrol parking lots from 7 a.m. until the latest evening classes let out. UA police also offer assistance to motorists with battery jumps, inflating tires, unlocking vehicles, and obtaining fuel for a small fee.

To request nonemergency assistance, call extension 7123. To schedule an appointment for an educational program, call extension 5454.

For emergencies, dial 911 from any campus telephone.

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## STUDENT CAMPUS PATROL

A student escort service operates 5 p.m. to 1 a.m. seven days a week for the safety of anyone walking alone on campus during the evenings. By calling extension 7263, an escort will come to the student's location and accompany him/her to any campus building or parking lot.

Employed and trained by The University of Akron Police Department, the campus patrol teams are easily identified by labeled royal blue jackets or yellow t-shirts. These teams assist the University police in patrolling campus parking lots and other campus areas and report suspicious individuals or activities directly to the police dispatch center.

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## EMERGENCY PHONES

Yellow or red emergency phones are directly connected to the UA Police Department. These phones are strategically located throughout campus pedestrian walkways and inside parking decks. Police respond to the lifting of any emergency phone receiver, even if no words are spoken.

Outdoor security phones are at the main entrances of all campus residence halls. UA Police and other campus numbers can be dialed on these phones.

If using an off-campus phone, dial 972 before the campus extension.

## RESIDENCE HALLS

Access into the University's residence halls is restricted to student occupants, escorted guests, and authorized University personnel. Unescorted persons are not permitted in the residence halls. The visitation schedule: the halls on the south side of campus have 24-hour visitation each day, while the halls on the north side of campus have 24-hour visitation on weekends only. Weekday visitation on the north side is 12:00 noon to midnight, Monday through Thursday. These are the hours that students may have an escorted guest of the opposite sex in their rooms. Residence hall occupants have the option to restrict visitation hours further.

Except for Bulger, Spanton, and Gallucci halls, all residence halls are locked 24 hour per day. Bulger and Spanton halls are locked from 5:00 p.m. to 8:00 a.m. Gallucci is locked from 11:00 p.m. to 8:00 a.m. In addition, most residence halls have 24-hour monitored entrance desks. Residents may enter and leave at their own discretion. However, after 7:00 p.m., residents must present their campus and separate residence hall IDs. Each student has access to his or her own building and room with his/her room key. The residence hall staff receives specialized training from UA police on security and safety procedures and enforcement of residence hall regulations.

The professional staff also conducts programs with resident students to heighten awareness of safety on campus. Sessions cover topics from common sense precautions, such as walking with a companion or in groups at night or making sure doors are locked when students leave their rooms, to more difficult issues such as acquaintance rape. Other programs are offered through student programming. "Sex Week," a nationally recognized program, covers topics such as safe sex, rape prevention, gay/lesbian issues, and interracial relationships.

## CAMPUS BUILDINGS

Most University academic facilities are open to the public from 7 a.m. until the latest evening classes let out. Administrative buildings are generally locked at 6 p.m. When the University is closed, all buildings are locked and may be opened only by authorized personnel.

## HEALTH AND SAFETY

Members of the Department of Environmental and Occupational Health and Safety routinely inspect the campus for environmental and safety concerns. The Department of Physical Facilities maintains University buildings and grounds and regularly inspects facilities and promptly makes repairs to ensure safety and security.

The University Police Department works with both units to respond to reports of potential safety and security hazards, such as broken windows and locks. UA police also work with physical facilities personnel to help maintain adequate exterior lighting and safe landscaping practices.

## PERSONAL RESPONSIBILITY

The cooperation and involvement of students, faculty, and staff in any campus safety program is absolutely necessary. All must assume responsibility for their own safety and security of their property by following simple, common sense precautions. For example, although the campus is well-lighted, everyone should confine their movements to well-traveled areas. There is safety in numbers, and everyone should walk with a companion or with a group at night. Valuables should be marked with a personal identification number in case of loss or theft. Bicycles should be properly secured when not in use. Automobiles should be locked at all times. Valuables and purses should never be lying in view in a car but locked in the car trunk for safekeeping.

## CRIME STATISTICS

The University of Akron Police Department prepares monthly statistics for the Federal Bureau of Investigation under the Uniform Crime Reporting (UCR) program. The serial numbers of property stolen on campus are reported nationwide through the National Crime Information Center. A LEADS computer terminal at the police station dispatch center allows information to be exchanged with law enforcement agencies across the United States and Canada.

The following statistics are from the University Uniform Crime Reports of the past four calendar years. The statistics under O.C. are crimes reported to the City of Akron Police Department that occurred at University related properties off campus.

CRIME	NUMBER OF REPORTS						
	91	92	O.C. 92	93	O.C. 93	94	O.C. 94
<b>Homicide</b>	0	0	0	0	0	0	0
<b>Forcible Rape</b>	0	0	1	0	0	2	0
<b>Robbery</b>	4	5	1	7	1	2	0
<b>Aggravated Assault</b>	3	3	0	6	5	1	0
<b>Burglary</b>							
Forcible Entry	37	33	0	11	0	10	0
Unlawful Entry (no force)	13	5	0	8	0	11	0
Attempted Forcible Entry	5	11	2	7	0	3	0
Burglary Total	51	49	2	26	5	24	0
<b>Theft</b>							
Under \$50	189	183	0	175	1	151	0
\$50 to \$200	221	171	1	182	3	184	0
\$200 and Over	129	108	1	161	5	184	0
Theft Total	541	462	0	518	9	519	0
<b>Motor Vehicle Theft</b>	10	5	0	18	1	28	0
<b>Arson</b>	7	1	0	12	0	1	0

CRIME	NUMBER OF ARRESTS					
	1991	1992	1993	O.C. 1993	1994	O.C. 1994
Liquor Law Violations	32	35	64	54	32	54
Drug Abuse Violations	2	3	6		15	1
Weapons Possession	2	4	2		3	4

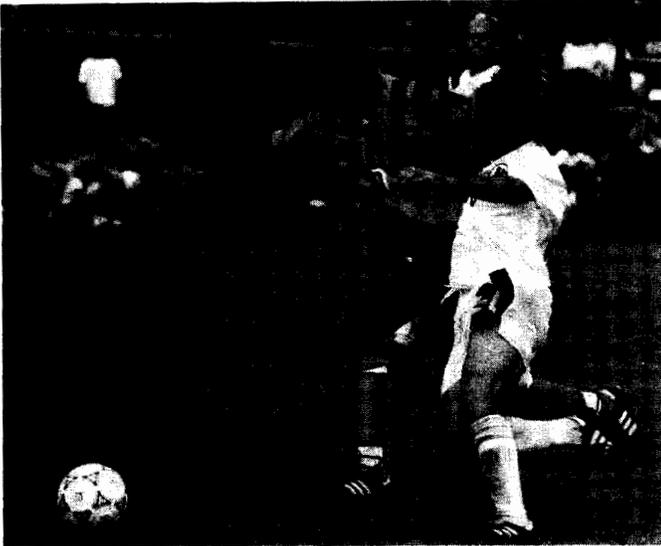
## EMERGENCY PHONE NUMBERS

Call extension 911 on campus to reach UA police immediately.

- Police .....7123
- Campus Patrol .....7263
- (Police Nonemergency) .....8123
- Environmental and Occupational Health and Safety.....6866
- Fire.....911
- EMS/Medical .....911
- Electrical/Plumbing.....7415
- Hazardous Materials .....8123
- Closing Information .....7111

These emergency numbers are monitored 24 hours a day. If calling from an off-campus phone, dial 972 and then the four-digit number you wish to reach. Use 911 for emergencies when dialing from all campus extensions.

# Cocurricular Activities and Other Services



The variety of experiences gained through involvement in cocurricular and social activities during students' college years contribute to a more well-rounded University education beyond the classroom. Cocurriculars are those activities that allow students the opportunity to develop emotionally, physically, politically, academically, socially, and spiritually, and include intercollegiate and intramural sports, student publications, honor societies, departmental organizations, special interest groups, university-wide programming committees, student government, and liberal arts activities. Participation in cocurricular activities provides students with an opportunity to meet new acquaintances, network with professional contacts, broaden the classroom experience, and develop marketable leadership skills for a career search. Studies show that involved students have a higher rate of retention.

Eligibility in the 200-plus registered student organizations and other cocurricular activities is dependent on the student's maintenance of academic good standing at the University. Some selective organizations such as honoraries and varsity athletics require special eligibility criteria.

## PERFORMING ARTS

Opportunities are abundant for students to develop the ability to face the public through such live audience performances as plays, debates, recitals, and dance, as well as media presentations through radio, television, and film.

A student who aspires to act, write, or produce in theatre is encouraged to attend auditions and to apply for technical positions. The experimental theatre in Guzzetta Hall is distinguished by its flexible design. The University Theatre in Kolbe Hall, with its intimate proscenium stage, is the scene for many University productions.

Those interested in mass media communication will find that Guzzetta Hall contains fully equipped television and radio studios. A student may participate in the operation and broadcast of public radio station, WZIP (88.1 FM).

A University student interested in music may audition for membership in the famous 200-piece Marching Band, the Concert Choir, the Vocal Jazz Ensemble, the award-winning Jazz Ensemble, the University Orchestra, the Concert Band, the Symphonic Band, the outstanding Opera Theatre, the Evening Chorus, which performs regularly with the Akron Symphony Orchestra, or any number of other small or specialized musical ensembles or clubs.

An additional opportunity in the area of performing arts is offered through ballet, in the form of the Repertory Dance Ensemble, which works closely with the world-renowned Ohio Ballet.

## ATHLETICS

The University of Akron believes that intercollegiate athletics are an important and wholesome adjunct to the principal mission of the University. The University believes that it serves a purpose for the physical well-being and health of its students, as well as for their mental development. Accordingly, it provides programs of intercollegiate and intramural sports. Participants in either program must be, first and foremost, full-time students whose fundamental aim is to obtain a sound education.

The University of Akron currently competes in 17 NCAA Division I intercollegiate sports. The three athletic seasons include: Fall football, soccer, men's and women's cross country, and women's volleyball; Winter men's and women's basketball, men's and women's indoor track, and riflery; Spring women's fast-pitch softball, baseball, golf, men's and women's tennis, and men's and women's outdoor track. The athletic program actively seeks participants from the campus population and annually attracts some 400 students for participation in various intercollegiate sports. Likewise the athletic department selects each spring a cheerleader squad and dance team from the campus community and incoming high school seniors.

Intercollegiate athletic programs enhance the educational opportunities of the students who participate in those activities. The men and women who are involved in intercollegiate athletic programs at The University of Akron shall be expected to maintain the academic standards required of all students at the University and adhere to applicable NCAA and Mid-American Conference regulations.

Students are admitted free to all regular season home intercollegiate contests with a validated I.D. Likewise, students who wish to work for the promotion of intercollegiate athletics on campus are urged to join the student sports committee.

Further educational opportunities in athletics can be pursued through the Director of Athletics Office (JAR 183).

## STUDENT PUBLICATIONS

*The Buchtelite* is a student newspaper issued twice weekly during the academic year. It serves as the campus "voice" with news stories, interest columns, and photographs revolving around campus events. Copies of each edition are distributed to students free of charge at various campus locations. Students interested in becoming a member of the *Buchtelite* staff should visit the office located in Gardner Student Center, third floor.

The *Tel-Buch* is the University's yearbook with comprehensive editorial and photographic coverage of student life at The University of Akron. This impressive publication is free to students in attendance during the school year that the yearbook summarizes. The *Tel-Buch* office is located in the lower level of Gardner Student Center.

*Akros Review* is a literary journal of creative writing and art work primarily by students of The University of Akron and secondarily by artists and writers in the Northeast Ohio area.

*ARETE* is composed of journals and newsletters produced by law students to advance the goals of the profession, present opinions of contemporary issues related to law, and to facilitate communication among law students in The University of Akron School of Law.

## DEPARTMENTAL ORGANIZATIONS

Academic departments sponsor organizations that provide social and educational programs and activities in special fields of study so that students may enhance and expand their knowledge of their academic field outside of the classroom. Guest speakers, community service projects, and career nights are often included in the calendar of programs. Joining a departmental organization allows students the opportunity to meet classmates with similar interests, to develop study groups, to network with the professional world, and to build a strong academic foundation for future career paths.

## ASSOCIATED STUDENT GOVERNMENT

The Associated Student Government (ASG), the representative government for undergraduate students, provides services and forums to address student needs, participates in University governance, and decides budgetary allocations to student groups. The ASG holds general elections in mid-March of each year to decide the

student leadership for the following academic year. Student Government works to assess and fulfill the special needs of students, including Disabilities Awareness Week, Town Hall meetings, issue forums and co-sponsorship of campus lectures. Freshmen can also become involved as a Freshman Senator through elections that occur in September. At the All Campus Recognition Dinner at the end of the year, ASG recognizes outstanding achievement by awarding Who's Who and A-Key awards. Open to all undergraduate students, the ASG office is located in Gardner Student Center 127, (216) 972-7002.

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## FRATERNITY AND SORORITY LIFE

Greek Life at The University of Akron is as unique as the college experience itself. The Office of Fraternity and Sorority Life assists 29 registered fraternities and sororities with a common founding principle of friendship, scholarship, leadership, and community service. Students may become involved by serving as president of an organization, playing intramural sports, participating in a leadership conference, sponsoring an alumni event, coordinating a fund raising project to benefit a local charity, tutoring disadvantaged children, or attending a social function or a Zip game. The opportunities for meaningful campus and community involvement in the Greek community are endless. Members of the Greek community are the most active segment of the student population. From this involvement, each student learns new skills and experiences personal growth and development. Studies have shown that members of Greek organizations have a higher rate of graduation and remain more active as loyal UA alumni than those who chose not to join fraternities and sororities. The Office of Fraternity and Sorority Life is located in Gardner Student Center 212, (216) 972-7909.

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## UNIVERSITY PROGRAM BOARD

University Program Board (UPB) is the all-campus activities board responsible for providing educational, recreational, social, and musical events for the campus community. The Leadership Council has 10 student positions, including four officers and six program chairpersons. Council positions are selected every April. Committee membership is open to any student interested in developing organizational, leadership, and management skills. Programs include College Bowl Campus Tournament, Children's Holiday on Campus, Chuckery Band Series, Contemporary Issues Series, and Cultural Diversity Series. The UPB office is located in the lower level of Gardner Student Center, (216) 972-7014.

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## DIVERSITY OPPORTUNITIES

The University of Akron is a diverse community of students representing more than 80 countries. As such, we are provided with a unique opportunity to celebrate this diversity through multicultural programming, international celebrations, and sensitivity seminars. The Student Development office provides the Salad Bowl Celebration celebrating the food, dance, music, customs, and talents of our students. The Diversity Committee programs the annual Martin Luther King, Jr. Day Celebration during the observed holiday and works to provide sensitivity seminars throughout the year. In addition, the Cultural Diversity Committee of University Program Board presents a multitude of diverse talents and addresses issues through human and civil rights lectures, and entertainers from every walk of life. Greek students address topics of college life during Collegiate Issues month and Associated Student Government's Minority Affairs Commission offers opportunities for confronting these issues.

A number of campus departments such as the Black Cultural Center, the Office of International Programs, Peer Consultants, Minority Affairs, and the campus-wide Diversity Council attend to supporting the value of diversity programming and multicultural awareness. For more information about specific programs, consult the Directory for these mentioned departments.

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## THE BLACK CULTURAL CENTER

The Black Cultural Center (BCC) plans and implements educational and cultural programs and activities which address and reflect the African American Cultural experience. The center has as part of its mission the responsibility to ensure that the culture of African Americans is celebrated, understood, expanded, and transmitted within the context of the University and the Greater Akron community. In addition, the Center seeks to create opportunities to increase multicultural communication, awareness, and sensitivity. The BCC provides supports to all minority students. The Black Cultural Center and Gallery of Akron's African American History are now part of The Cultural Diversity Center located in the Buckingham Center for Continuing Education. For information, please call (216) 972-7030.

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## CENTER FOR CHILD DEVELOPMENT

The University of Akron Center for Child Development provides a variety of early childhood programs which are open to students, faculty, staff, and the community. Each classroom is staffed with a Pre-K certified teacher and student aides. Opportunities are provided for the children to engage in developmentally appropriate activities in the following areas: creative art, language arts, music and rhythms, science exploration, gross motor and fine motor development, socio-dramatic play, multi-sensory activities, and computer experience. The program emphasizes the development of a positive self concept through an anti-bias curriculum.

The Center for Child Development is open during the Fall and Spring semesters of the academic year between 7:30 a.m. and 6:00 p.m. Monday through Friday. The program offers hourly flextime and half-day programs for children three to five years old and toilet trained. Full-day sessions are available year round for children two-and-a-half to five years old and toilet trained.

A summer pre-school flextime program is offered Summer Session I.

A summer program is also offered for school-aged children. This program is offered during Summer Sessions I and II from 7:00 until 6:00 p.m.

For more information call the Center for Child Development, (216) 374-8761.

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## ECUMENICAL CAMPUS MINISTRY

The Ecumenical Campus Ministry is a Christian Ministry funded by the Christian Church (Disciples of Christ), American Baptist (USA), United Church of Christ, United Methodist, Presbyterian Church (USA), Church of the Brethren, and the Episcopal Church. This Ministry is on the University Campus to provide programming and activities, counseling, and as a visual representative of the various denominations. Its services are available to all members of the academic community, students, faculty, and staff.

The Ministry provides social projects and activities, special worship celebrations, discussion groups, and personal counseling. Students are invited to share in this Ministry through participation in any of its programs and services. For more information about the Ministry, call the office at (216) 253-9370.

For more information on other campus activities, call (216) 376-3585. A priest is available to all of the Eastern Orthodox faith at the Greek Orthodox Church of the Annunciation adjacent to the campus at 129 South Union Street. There are synagogues in the city for the student of orthodox, conservative, and reformed Jewish faith. The Akron Jewish Center, located on the west side of the city, provides cultural opportunities for all students and residents of the city.

# DIRECTORY OF STUDENT ORGANIZATIONS

March 1995

## Honoraries

Akron Premedical Honor Society (biology)  
 Alpha Alpha Alpha (social work)  
 Alpha Kappa Delta (sociology)  
 Alpha Sigma Lambda (non-traditional scholastic)  
 Beta Alpha Psi (accounting)  
 Beta Gamma Sigma (business)  
 Chi Sigma Iota (counseling)  
 Delta Phi Alpha (German)  
 Eta Kappa Nu (electrical engineering)  
 Golden Key National Honor Society  
 Kappa Delta Pi (education)  
 Kappa Omicron Nu (home economics)  
 Mortar Board (leadership/scholastic)  
 National Residence Hall Honorary  
 Omicron Delta Kappa (leadership/scholastic)  
 Order of Omega (interfraternity)  
 Phi Alpha Theta (history)  
 Phi Eta Sigma (freshmen scholastic)  
 Phi Theta Kappa (Community & Technical College)  
 Pi Delta Phi (French)  
 Pi Mu Epsilon (mathematics)  
 Pi Sigma Alpha (political science)  
 Rho Lambda (panhellenic)  
 Sigma Delta Pi (Spanish)  
 Sigma Iota Epsilon (management)  
 Tau Alpha Pi (engineering & science technology)  
 Tau Beta Pi (engineering)

## Professional

American Chemical Society  
 American Institute of Aeronautics & Astronautics  
 American Institute of Chemical Engineers  
 American Production & Inventory Control Society  
 American Society for Training and Development  
 American Society of Civil Engineers  
 American Society of Interior Designers  
 American Society of Mechanical Engineers  
 Biomedical Engineering Society  
 Delta Sigma Pi  
 Graduate Business Student Association  
 Financial Management Association  
 Institute of Management Accountants  
 National Society of Black Engineers  
 Ohio Collegiate Music Educators Association  
 Phi Alpha Delta Law Fraternity  
 Phi Delta Phi  
 Pi Sigma Epsilon  
 Polymer Science Student Organization  
 Public Relations Student Society of America  
 Society for Human Resource Management  
 Society of Plastics Engineers  
 Women in Communications, Inc.

## Publications

*Akros Review*  
*The Buchtelite*  
*Tel-Buch*

## Special Interests

Akron Rainbow Coalition  
 Alpine Ski Team  
 Amateur Radio Club  
 Amnesty International Legal Support Network  
 Aquatics Club  
 BACCHUS  
 Bike Club  
 Black United Students  
 Campus Habitat for Humanity  
 Chess & Go Club  
 Circle K  
 Environmental Professionals Implementing Change (EPIC)  
 Filmsters  
 Forensics Union  
 Gospel Choir  
 Green Dragon Kung-Fu Club  
 Guitar Club  
 Intelligent and Talented Women Athletes  
 Karate/Judo/Taekwondo Club  
 Lacrosse Club  
 Lesbian/Gay/Bisexual Union  
 Northeastern Ohio Flute Association  
 Outing Club  
 Pre-Law Club  
 Senior Class Board  
 Ski Club  
 Society of Women Engineers  
 Soul Patrol  
 Sun Dragon Martial Arts Club  
 The Ambassadors  
 Unity Players  
 University Gaming Society  
 Vietnam Veterans Chapter  
 Women's Network Student Chapter  
 Zip Recruiters

## Nontraditional

Alpha Sigma Lambda (scholastic honorary)  
**Graduate**  
 Chi Sigma Iota  
 Counseling Psychology Graduate Student Organization  
 Graduate Business Student Association  
 Graduate Nursing Student Organization  
 Graduate Student Government  
 Industrial/Organizational Psychology Graduate Students  
 Minority Graduate Student Council  
 Polymer Science Student Organization  
 Society of Plastics Engineers  
 Student Association for Graduates in Education (SAGE)

## Law

Amnesty International Legal Support Network  
 Association of Trial Lawyers of America  
 Black Law Students Association  
 Bracton's Inn Oral Advocacy Society

Delta Theta Phi Law Fraternity  
 Environmental Law Society  
 International Law Society  
 Jewish Law Students Association  
 Law Association for Women  
 National Association of Criminal Defense Lawyers  
 Phi Alpha Delta Law Fraternity  
 Phi Delta Phi  
 Sports and Entertainment Law Society  
 Student Bar Association

## Religious

Athletes in Action  
 Baptist Student Union  
 Campus Focus  
 Interfaith Christian Association  
 Intersarsity Christian Fellowship  
 Muslim Students Association  
 Newman Catholic Community  
 True Vine Campus Ministry

## Political

College Republicans  
 University Democrats

## Military

Arnold Air Society  
 Association of the U.S. Army  
 National Society of Pershing Rifles  
 Rangers  
 Sabre Drill Team

## Programming

Residence Hall Program Board  
 University Program Board

## International

African Students Union  
 American and Japanese Ambassadors Council  
 Chinese Student Association  
 Chinese Student Society  
 Hellenic Club  
 Hispanos Organizados por Lengua y Amistad (HOLA)  
 Hong Kong Students Association  
 Indian Students Association  
 International Students Club  
 Italian Club  
 Korean Student Association  
 Lebanese Student Club  
 Minority Graduate Students Organization  
 Slavic Society  
 Thai Students Organization  
 Turkish American Students

## Governing Bodies

Associated Student Government  
 Black Greek Council  
 Graduate Student Government  
 Interfraternity Council  
 Panhellenic Council  
 Residence Hall Council  
 Student Bar Association

## Social Fraternities

Delta Tau Delta  
 Lambda Chi Alpha  
 Phi Beta Sigma  
 Phi Delta Theta  
 Phi Gamma Delta  
 Phi Kappa Psi  
 Phi Kappa Tau  
 Phi Sigma Kappa  
 Pi Kappa Epsilon (Lone Star)  
 Sigma Alpha Epsilon  
 Sigma Nu  
 Sigma Pi

Sigma Tau Gamma  
 Tau Kappa Epsilon  
 Triangle

## Social Sororities

Alpha Delta Pi  
 Alpha Gamma Delta  
 Alpha Kappa Alpha  
 Alpha Phi  
 Chi Omega  
 Delta Gamma  
 Delta Sigma Theta  
 Kappa Kappa Gamma  
 Sigma Gamma Rho  
 Zeta Phi Beta

## Departmental

Accounting Association  
 Advertising Club  
 Akron Council of Education Students  
 Anthropology Club  
 Biology Club  
 Black Education Students  
 Business Professionals of America  
 College of Business Dean's Advisory Council  
 Collegiate Nursing Club  
 Collegiate Secretaries International  
 Computer Science Club  
 Counseling Psychology Graduate Student Organization  
 Data Processing Management Association  
 Economics Club  
 Electronics Club  
 Engineering Student Council  
 Fire Protection Society  
 Future Physicians Club  
 Geography Club  
 Geology Club  
 Gerontology Association  
 Honors Club  
 Hospitality Club  
 Industrial/Organizational Psychology Graduate Students  
 Institute of Electrical & Electronics Engineers  
 International Business Association  
 International Law Society  
 Kappa Kappa Psi  
 League of Black Communicators  
 Literary Guild  
 Math Club  
 National Association of Black Accountants  
 Organization for Children's Health Care  
 Philosophy Club  
 Psi Chi  
 Psychology Club  
 Society of Automotive Engineers  
 Sociology Club  
 Student Art League  
 Student Association for Graduates in Education  
 Student Council for Exceptional Children  
 Student Dietetic Association  
 Student Fashion Association  
 Student Social Work League  
 Student Toastmasters  
 Tau Beta Sigma  
 Theatre Guild



# 3

Admissions,  
procedures,  
requirements,  
and fees

# Admissions

Admission is necessarily limited by the University's capacity to provide for the student's educational objectives. The University reserves the right to approve admission only to those whose ability, attitude, and character promise satisfactory achievement of University objectives. Special consideration for admissions and housing may be given to those applicants who provide The University of Akron with cultural, racial, economic, and geographic diversity, who possess outstanding talents, or whose previous academic performance may have been affected by physical, mental, or learning environment factors.

## CLASSIFICATION OF STUDENTS

The University of Akron classifies its students according to their needs, educational background, goals, and abilities. Classifications include:

- **Undergraduate** - A student who has not earned the baccalaureate degree and is eligible to enroll in undergraduate-level credit courses.
- **Postbaccalaureate** - A student who holds the baccalaureate degree from an accredited institution, who is eligible to enroll in credit courses on the undergraduate level, and who has not been admitted to the Graduate School. A postbaccalaureate student applies for admission to the college (arts and sciences, education, etc.) where undergraduate credit is to be earned.
- **Graduate** - A student who holds the baccalaureate degree from an accredited institution, has been admitted to the Graduate School, and is eligible to enroll in graduate-level credit courses.
- **Professional** - A student who holds the baccalaureate degree from an accredited institution and has been admitted to the School of Law.
- **Special Student** - A student who does not meet the regular admissions requirement but qualifies by certain abilities or maturity and is admitted after special petition.
- **Auditor** - A student who wishes to enroll in a course without obtaining a grade-point value ("A-F") or a grade of noncredit or credit. Such students must indicate that they are auditors at the time of registration. Audit status may be denied if space is not available. An auditor is expected to do all prescribed coursework except the writing of examinations.
- **Post-Secondary Enrollment Options** - A student who is currently enrolled in high school may enroll in the post-secondary enrollment options program. Students must meet the outlined requirements for these programs.
- **Guest or Transient Student** -  
(from another institution) A student who is regularly enrolled and eligible to continue at another institution, and who desires to enroll at The University of Akron for specified courses. A student who is currently on suspension from the home institution is not eligible to be a Guest student. There is a two consecutive term limit for this classification.  
  
(from The University of Akron) A student enrolled at The University of Akron who must obtain written permission from the dean of the student's college before enrolling (guest student status) for credit work at another institution. Credit for such work may be granted at the discretion of the dean.

## ADMISSION PROCEDURE

The University of Akron operates under a policy of rolling admissions, which means an applicant receives a letter of admission as soon as all credentials are processed. There is no set date for notification of admission; it is an ongoing process. However, it is advisable for a prospective student to submit all credentials as early as possible to be assured the best selection of classes and/or a room in the residence halls.

Admission procedures vary for different types of students. The various admissions categories include: recent high school graduate, "new majority" adult student, transfer student, postbaccalaureate student, special student, guest student, post-secondary enrollment options student, and international student.

Please contact the Office of Admissions for application deadlines and admission information, (216) 972-7100, or toll-free (800) 655-4884.

## Graduating High School Seniors

A student currently enrolled as a high school senior or a student who has graduated from high school not more than one year ago should apply for admission as follows:

- The State of Ohio has adopted a policy stating that students must pass the ninth-grade proficiency test in order to receive a diploma, except for those students who are exempt from taking the test. Therefore, The University of Akron requires successful completion of the ninth-grade proficiency test for graduating high school seniors. The GED Certificate of High School Equivalency is recognized in lieu of the diploma.
- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100, or toll-free (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron and should specify what fees and for which student the payment is being made.
- Send a completed copy of the College Prep Core Curriculum form to the Office of Admissions at the time of application.
- Send a student transcript to the Office of Admissions at the time of application. This record must be received before any admission action can be taken by the University.
- Take entrance tests. Arrangements may be made through the student's high school to take the ACT or SAT. (The University's Counseling and Testing Center also serves as a testing site for the ACT test.) Test scores must be submitted before an applicant can be formally admitted to the University.
- The University requires enrollment in basic mathematics and/or English if the student's academic adviser determines that deficiencies exist in one or both of these areas. This recommendation will be based on the following: work completed at a previous institution in mathematics and/or English, high school academic record (if available), standardized test results (ACT or SAT if available), and University mathematics and/or placement test results. If a mathematics or English placement test is deemed necessary to comply with this policy, the student must take the appropriate placement test(s) by the completion of the first term of attendance.
- To arrange for the mathematics test, contact the Testing Bureau, Simmons Hall 161, at (216) 972-7084. The English test can be taken by contacting the Department of Developmental Programs, Carroll Hall 210, at (216) 972-7087. Have test score(s) interpreted by contacting the dean of the University College, Spicer Hall 214, at (216) 972-7066 two days after taking the appropriate test(s). Please note that failure to take the required test(s) prohibits enrollment in college-level mathematics and/or English courses.
- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission to the University, the student will receive directions for new student orientation and academic advising.

## Adult Students

An adult student who has graduated from a regionally accredited secondary school or completes the GED test is eligible to enroll.

The following application procedures should be followed:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100, or toll-free (800) 655-4484, or by writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron, and should specify what fees and for which student the payment is being made.
- If the student is under 25 years of age at the beginning of the term for which they apply, the student must request a high school transcript. This official record must be received and evaluated before admission action can be taken.
- If the student is under 21 years of age at the beginning of the term for which they apply, the student must submit results of either the ACT or SAT. (The University of Akron's Counseling and Testing Center serves as a testing center for the ACT test.) These test scores are needed before an applicant is formally admitted to the University.
- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission to the University, the student will receive directions concerning new student orientation. All freshmen receive academic advising through the Academic Advising Center.

## Transfer Students

A student applying for admission who has formerly attended another regionally accredited institution of higher learning may apply to transfer to The University of Akron. Also, the student must present scholastic records judged to be satisfactory by University of Akron officials. The assessment of scholastic records may include consideration of prior courses, grade-point average, credit value, and other such factors which the University or individual colleges use in evaluating, ranking, or otherwise determining admissibility to the University or to specific programs. Please contact the Office of Admissions for admission criteria.

A transfer student should apply as follows:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100, or toll-free (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron, and should specify what fees and for which student the payment is being made.
- A transfer applicant must request the official transcripts from the records office of all institutions previously attended. They should be mailed to the Office of Admissions.
- A student under 25 years of age and with fewer than 12 credits of accredited transfer work must submit a high school transcript or GED scores along with the college transcript(s). A student under 21 years of age and having fewer than 12 transfer credits must submit results from the ACT or SAT test in addition to a high school transcript or GED scores. If it appears necessary to validate the transfer credits of a student with more than 12 credits, the appropriate admitting officer may also require the ACT battery. These documents must be received and evaluated before any admission action can be taken by the University.
- The University requires enrollment in basic mathematics and/or English if the student's academic adviser determines that deficiencies exist in one or both of these areas. This recommendation will be based on the following: work completed at a previous institution in mathematics and/or English; high school academic record (if available); standardized test results, ACT or SAT (if available); and University mathematics and/or English placement test results. If a mathematics or English placement test is deemed necessary to comply with this policy, the student must take the appropriate placement test(s) by the completion of first term of attendance. Arrange for the mathematics test by contacting the Testing Service (Simmons 161, (216) 972-7084); arrange for the English test by contacting the Department of Developmental Programs (Carroll 210, (216) 972-7087); and, have test score(s) interpreted by contacting the dean of the University College two days after taking the appropriate test(s).
- Please note that failure to take the required test(s) prohibits enrollment in college level mathematics and/or English courses.
- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission, the student will receive directions concerning academic counseling. University College freshmen and some sophomore day students receive academic advisement through the Academic Advisement Center. A student in the Community and Technical College or another degree-granting college will be advised by a faculty member in the appropriate department.

## State Policy on Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a new statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the State Policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

### Transfer Module

The new Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a specific subset or the entire set of a college or university's general education requirements. The Transfer Module contains 54-60 quarter hours or 36-40 semester hours of specified course credits in English composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science, and interdisciplinary coursework.

A transfer module completed at one college or university will automatically meet the requirements of the transfer module at the receiving institution, once the

student is accepted. Students may be required, however, to meet additional general education requirements that are not included in the Transfer Module.

### Conditions for Transfer Admission

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or the Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of D or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.
2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade C or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module and only courses in which a C or better has been earned will transfer.
3. The policy encourages receiving institutions to admit on a non-preferential consideration basis students who complete the Transfer Module with a grade of C or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of C or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

### Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

### Appeals Process

A multi-level, broad based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

## Postbaccalaureate Students

A student who holds the baccalaureate degree from an accredited college and wishes to continue educationally but has not been admitted to the Graduate School, should apply as a postbaccalaureate student through the Office of Admissions. This procedure should be followed:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100, or toll-free (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron, and should specify what fees and for which student the payment is being made.
- A postbaccalaureate student must request transcripts from the institution from which he or she received a bachelor's degree and any transcripts for any subsequent coursework. These documents must be received and evaluated before any admission action can be taken by the University.

- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission, the student will receive information on registration and instructions for academic counseling by a faculty member in the appropriate department.

### Special Student

A special student is one who does not qualify for regular admission to the University or who is participating in a special short-term academic program.

A special student may not take more than 15 credits unless official status as a regular student is gained.

This procedure should be followed:

- Obtain an application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001.
- Obtain permission to enroll under the Special Student category from an admissions officer.
- Information regarding registration for classes and academic advising will be forthcoming in the letter of admission to the special student program.

### Post-Secondary Enrollment Options

A student in the 11th or 12th grade may enroll in the Post-Secondary Enrollment Options program. A student below the 10th grade may enroll in the Youth Enrollment Options Program. Students must meet the outlined criteria:

- Demonstrated academic ability, maturity, and preparation.
- 3.0 grade point average (GPA) for college preparatory coursework.
- Students above 9th grade must have passed the 9th grade proficiency tests.
- Students without college preparatory coursework must have a 3.3 GPA for work completed.
- Students without college preparatory coursework and with less than a 3.3 GPA are limited to performance type coursework such as music, art, etc.
- The Post-Secondary Enrollment Options programs are limited and selective. The University reserves the right to accept only as many qualified students as can be properly served.

This procedure should be followed:

- Obtain a post-secondary enrollment options application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001.
- Complete and return the form with the guidance counselor's and parent's signatures and the non-refundable application fee (a one-time charge).
- Information regarding acceptance into the program, registration for classes, and academic advising will be forthcoming in the letter of admission to the post-secondary enrollment options program.

### Guest Students (Non-University of Akron Students)

An undergraduate guest student must apply to the Office of Admissions. A graduate student must apply through the dean's office of the Graduate School.

A guest student may not, as a general rule, attempt more than 16 credits in any semester or session and is subject to all rules and regulations of The University of Akron. Guest students must be in good standing at their home school.

The following procedures should be followed when applying to the University as a guest student:

- Obtain a guest student application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Complete it and return it with the nonrefundable application fee (a one-time charge).
- Receive advice and written approval by the home institution of the coursework for which the student plans to enroll.
- After admittance, information regarding registration will be sent to the student. The admissions officers act as guest student counselors.

## CONDITIONAL/ UNCONDITIONAL ADMISSION

The University of Akron has adopted a "conditional/unconditional" admission policy for traditional-aged entering freshmen effective Fall 1994. Traditional-aged freshmen are defined as those who have graduated from high school within the previous two years. The policy was established to communicate to students whether they are academically prepared to be successful at the University. The key elements of the policy are:

Entering freshmen who are identified as being academically underprepared will be admitted "conditionally" and be required to complete skill building courses and other prescriptive activities. Conditionally admitted students are those with less than a 2.30 GPA and less than 16 ACT/650 SAT with or without the core curriculum or less than a 2.8 GPA and less than 19 ACT/800 SAT without the core curriculum.

Core curriculum is defined by the following:

English	4 units
Mathematics	3 units
Natural Science	3 units
Social Science	3 units
Foreign Language	2 units

Most students (including those who are undecided about their major) begin their college career in the University College. Students are admitted "unconditionally" to the University College if their credentials are above the standards for conditional admission but below the standards for direct admission to an academic program.

All students (both conditional and unconditional) pursuing an associate's degree will be admitted directly to the Community and Technical College.

Academically talented freshmen will have the option of admission directly to the program of their choice. To be directly admitted, a student must meet certain academic standards such as high school grade-point average, test scores, class rank, and core curriculum. The standards for direct admission are determined by each department.

### Criteria for Direct Admission to Degree-Granting College

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
<b>Buchtel College of Arts and Sciences</b>	Requirements vary by department
Biology	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Chemistry	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Classics	<ul style="list-style-type: none"> <li>• 3.3 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Economics	<ul style="list-style-type: none"> <li>• 2.7 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
English	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Geography and Planning	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
<b>Buchtel College of Arts and Sciences, cont.</b>	
Geology	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
History	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Modern Languages	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 26 ACT - 1090 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Physics	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Political Science	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Psychology	<ul style="list-style-type: none"> <li>• 2.5 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Sociology	<ul style="list-style-type: none"> <li>• 2.7 high school grade point average</li> <li>• 18 ACT - 740 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
<b>College of Business Administration</b> (all departments)	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average or</li> <li>• upper 50% of high school graduating class</li> <li>• 21 ACT - 880 SAT</li> <li>• core curriculum</li> </ul>
<b>College of Education</b> (all departments)	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 20 of high school graduating class</li> <li>• core curriculum</li> </ul>
<b>College of Engineering</b> (all departments)	<ul style="list-style-type: none"> <li>• 3.4 high school grade point average</li> <li>• 24 ACT - 1010 SAT Composite score</li> <li>• 25 ACT - 560 SAT Math score</li> <li>• upper 25% of high school graduating class</li> <li>• core curriculum including: <ul style="list-style-type: none"> <li>— 4 units Math, including Trigonometry,</li> <li>— with grade of B or above,</li> <li>— 1 unit Chemistry, with grade of B or above</li> </ul> </li> </ul>
<b>College of Fine and Applied Arts</b>	Requirements vary by major below
Art	<ul style="list-style-type: none"> <li>• 3.3 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 30 of high school graduating class</li> <li>• core curriculum</li> </ul>

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
<b>College of Fine and Applied Arts, cont.</b>	
Communication	<ul style="list-style-type: none"> <li>• 3.4 high school grade point average</li> <li>• 25 ACT - 1050 SAT Composite score</li> <li>• 27 ACT - 600 SAT Verbal score</li> <li>• upper 25% of high school graduating class</li> <li>• core curriculum</li> </ul>
Communicative Disorders	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 10 of high school graduating class</li> <li>• core curriculum</li> </ul>
Dance	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• at point of audition, student must qualify for admission to Ballet V or higher</li> <li>• must continue in good standing and pass sophomore jury</li> </ul>
Music	No direct admission
Theatre Arts	<ul style="list-style-type: none"> <li>• 2.5 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 65 of high school graduating class</li> <li>• core curriculum</li> </ul>
Social Work	No direct admission
Home Economics and Family Ecology	Requirements vary by major below
Family Development, Child Development, and Pre-K Certification	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of coursework</li> </ul>
Child Life	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• directly admitted as Child Development major</li> <li>• as a junior must complete further evaluation based on interviews, interests, and grade point average</li> </ul>
Clothing & Textiles, Fashion Retailing, and Interior Design	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of coursework</li> </ul>
Dietetics, Foods and Nutrition, and Food Science	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 25% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of coursework</li> <li>• Food Science students must take Chemistry I and II courses</li> <li>• Didactic Dietetics students may be admitted directly to Dietetics; as juniors they must receive committee approval based on interviews</li> </ul>
Home Economics Education, Vocational Home Economics Teacher Education	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of coursework</li> <li>• meet with Home Economics adviser during first semester on campus</li> </ul>

## Criteria for Direct Admission to Degree-Granting College, cont.

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
<b>College of Nursing</b>	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 10% of high school graduating class</li> <li>• core curriculum including:               <ul style="list-style-type: none"> <li>• Algebra and Geometry</li> <li>• Biology and Chemistry</li> </ul> </li> </ul>
<b>Community and Technical College</b> (all departments)	All students, both conditional and unconditional, will be admitted directly.
<b>Wayne College</b> (all departments)	All students, both conditional and unconditional, will be directly admitted.

## INTERNATIONAL STUDENTS AND SCHOLARS

The University of Akron welcomes international students and visiting scholars and seeks to make their educational experience pleasant and meaningful. Each year, approximately 800 international students and scholars from 89 countries pursue studies and research at The University of Akron.

### Admission Procedures for International Students

International students can apply to begin their undergraduate study for the Fall or Spring semester or for either of the University's two summer sessions. Students should submit their applications at least two months in advance of the date they wish to begin their studies. Graduate students applying for an assistantship should submit applications nine (9) months before the term begins for best consideration.

The following procedures should be followed:

- Obtain an international student application from the International Admissions Officer, Office of International Programs, The University of Akron, Akron, OH 44325-3106, telephone (216) 972-6349, FAX (216) 972-8604, E-mail D2TMM@AKRONVM. Return the completed form with the nonrefundable application fee of \$50 (a one-time charge) with the following documentation:
  - an official transcript from all secondary and all universities attended previously. Original records in languages other than English must be accompanied by exact English translations and certified by the school, U.S. Consulate or other legal certifying authority.



- Proof of English language proficiency. The University requires each student for whom English is not the native language to take the Test of English as a Foreign Language (TOEFL). This test is administered throughout the world in major cities. Applications may be obtained from binational agencies, United States Information Service (USIS) offices, or from the Educational Testing Service, Princeton, NJ 08540. Undergraduate applicants are required to achieve a minimum TOEFL score of 500, and Graduate applicants must achieve a 550 or greater.

While a conditional or provisional admission is offered to students who are academically acceptable but who have not yet reached the level of English proficiency required for full admission, such students must attend intensive English instruction until they have attained the required level of English proficiency for full-time academic study. Such students can choose to attend a program of intensive English instruction at the University's English Language Institute until they have attained the level of English proficiency required for full-time academic study.

- Proof of adequate financial support. An international student should submit the Declaration and Certification of Finances (DCF) and an original statement from the bank showing availability of sufficient funds to cover the cost of the first year of study, and that these funds will be available to the student in this country.

### Costs and Financial Aid

To cover tuition and living expenses for the 1995-96 academic year, international undergraduate students, holding F-1 visas, will need approximately \$13,000, graduate students \$11,500, and Law students \$16,500. Additional costs for J-1 visa holders and student's dependents are indicated on the DCF.

There are a limited number of scholarships available to international undergraduates. Graduate students may request financial aid through fellowships and graduate assistantships. A graduate student interested in applying for this aid should request the necessary forms when requesting the admission application.

The University of Akron requires all international students and scholars to carry medical insurance that meets the minimum established requirements. Such health insurance coverage must be in effect during their stay in the United States. International students will not be permitted to register without proof of such coverage.

### International Student Orientation

International students are required to attend an International Student Orientation that takes place one week before classes and for which they are charged \$45. The orientation dates will be mailed to students with their orientation letter and immigration documents.

### Special Note

International students are encouraged to contact the Office of International Programs directly with questions about housing, climate, insurance, or immigration regulations. Questions concerning degree programs should be directed to the appropriate academic department.

# Procedures and Requirements

## NEW STUDENT ORIENTATION

All new freshmen and University College transfer students are required to attend an orientation program in conjunction with registration. Traditional freshmen attend a two-day program intended to insure a smooth transition from high school to college. It includes sessions on academic responsibility, current campus issues, finances, cultural diversity, and involvement in campus life as well as a tour, placement testing, academic advising, and registration. Transfer and adult students will attend a specialized full one-day session tailored to their particular needs.

Details and various orientation fees are included in the material received after admission. Multiple orientation sessions are available prior to each term and are filled on a first-come, first-served basis. Therefore, early and careful planning is important.

## ACADEMIC ADVISING

New students are required to meet with academic advisers upon initial entry to the University. Thereafter, students are strongly encouraged to see advisers each term to discuss degree requirements, career goals, major choice, course selection, and other academic concerns.

Conditionally admitted students will have required meetings with their assigned adviser to facilitate their prescribed learning activities.

## REGISTRATION

Each term it is necessary for a student to select courses, complete required forms, and pay the appropriate fees to register officially for classes. The student may elect to register by telephone or in person. Details about these options are described in the Schedule of Classes published every academic period and available upon request from the student's advising agency, the Office of Academic Advisement Center, the degree-granting college, Gardner Student Center, or Spicer Hall 104. Students enrolling after the official open registration period will be charged a nonrefundable late registration fee.

## CLASS ATTENDANCE

A student is expected to attend all meetings of a class for which he or she is registered. A student may be dropped from a course by the dean if absences are repeated and the instructor recommends this action; a student can gain re-admission only with permission of both dean and instructor. A student dropped from a course receives an "F" which counts as work attempted whenever grade-point ratio calculations are made.

## STUDENT SCHEDULES

### Additions to Student Schedules

A student must register for a course before the end of the fifth day of a fall or spring term or the second day of a summer session. Additions to the student's official schedule may be made after that date only with the permission of the adviser, instructor, and dean or the dean's designate.

A student in the University College should initiate all changes through an adviser in the Academic Advisement Center, Spicer Hall.

### Withdrawal Policy

A student may withdraw from a course without an adviser's or course instructor's signature through the 14th day of a semester or comparable dates during summer session, intersession, etc. After the 14th day of a semester, and up to the midpoint of a semester, a student may withdraw from a course with the signature of the student's adviser.

After the midpoint of a semester, a student must have the signature of both the course instructor and the adviser. Such authorization must be dated and processed through the offices of the Registrar and Cashier no later than the last day of the 12th week of classes or comparable dates during summer session, intersession, etc.

Should the instructor or adviser refuse to sign the withdrawal form, the student may appeal to the dean of the student's college, who shall make the final decision after consultation with the instructor or adviser who declined to approve the withdrawal.

An approved withdrawal after the 14th day of the term will be indicated on the University official academic record by a "WD." A student who leaves a course without going through the withdrawal procedure will be given an "F" in the course.

## Guest Student (University of Akron Students)

A University of Akron student may take coursework at another institution of higher education as a guest student. For all courses other than general education requirements, the student must obtain **prior** written permission from the dean of the college in which the student is enrolled; for general education courses, **prior** written permission must be obtained from the dean of the University College. These courses will be listed on the University official academic record. Each course will reflect the course number, title, grade, and credit value; no grade-point value will appear on the record and no grade-point average will be calculated for the course work listed. The name of the institution will be listed on the University official academic record as well as the date that the coursework was taken.

## GRADE POLICIES AND CREDIT

### Grades and the Grading System

A student will receive grades on various types of classroom performance during the process of most courses and a final grade at the end of the term. At the end of the term, the Office of the Registrar mails grade reports to a student's home address; summer grade reports are mailed for both summer sessions at the end of the second summer session.

Individual tests are usually graded with percentage or letter marks, but official academic records are maintained with a grade-point system.

This method of recording grades is as follows:

Grade	Grade Points Per Credit
A	4.00
A-	3.70
B+	3.30
B	3.00
B-	2.70
C+	2.30
C	2.00
C-	1.70
D+	1.30
D	1.00
D-	0.70
F	0.00
AUD (Audit)	0.00
CR (Credit)	0.00
NC (Noncredit)	0.00

The following grades may also appear on the term grade reports or on the official academic record. There are no grade points associated with these grades.

**I - Incomplete:** Indicates that the student has done passing work in the course but that some part of the work is, for good and acceptable reason, not complete at the end of the term. Failure to make up the omitted work satisfactorily by the end of the following term, not including summer sessions, converts the "I" to an "F". When the work is satisfactorily completed within the allotted time the "I" is converted to whatever grade the student has earned. (If instructors wish to extend the "I" grade beyond the following term for which the student is registered, prior to the end of the term they must notify the Office of the Registrar in writing of the extension and indicate the date of its termination. It is the responsibility of the student to make arrangements to make up the incomplete work. The faculty member should submit the new grade to the Office of the Registrar in writing.)

**IP - In Progress:** Indicates that the student has not completed the scheduled coursework during the term because the nature of the course does not permit completion within a single term, such as work toward a thesis.

**PI - Permanent Incomplete:** Indicates that the student's instructor and the instructor's dean have for special reason authorized the change of an incomplete ("I") to a permanent incomplete ("PI").

**WD - Withdraw:** Indicates that the student registered for the course but withdrew officially sometime after the second week of the term.

**NGR - No Grade Reported:** Indicates that, at the time grades were processed for the current issue of the record, no grade had been reported by the instructor.

**INV - Invalid:** Indicates the grade reported by the instructor for the course was improperly noted and thus unacceptable for proper processing.

### Importance of Grades

Grades determine whether a student is either eligible or ineligible to remain at the University. Eligibility in the 200-plus registered student organizations and other cocurricular activities is dependent on the student's maintenance of academic good standing at the University. Some selective organizations such as honoraries and varsity athletics require special eligibility criteria.

On the basis of grades, a student receives opportunities to take additional courses to accelerate academic progress.

A student should transfer from the University College to a degree-granting college when the grade and credit-hour requirements of that college have been met. Acceptance for admission to a college depends on the approval of the dean of the college which the student chooses to enter and on the student's academic performance to date.

### Dean's List

Undergraduate students who carry 12 graded credits or more without receiving an "Incomplete" or "In Progress" grade and earn a grade point average of 3.25 or better are eligible for inclusion on the Dean's List of their respective college. This is an undergraduate academic honor recognizing excellence in the classroom prior to the completion of the degree.

### Probation-Dismissal

A student who fails to maintain a grade-point average of 2.00 ("C") is placed on academic probation and may be subject to a change of courses, suspension, or some other form of discipline. Academic discipline is determined by the dean of the college in which the student is enrolled. Reinstatement of a student is determined by the dean of the college from which the student was dismissed.

Once dismissed from the University, a student is not eligible to register for credit courses until readmitted.

### Repeating Courses

Any course may be repeated TWICE by an undergraduate student subject to the following conditions:

- To secure a grade ("A-F") or a grade of "NC," "CR" or "AUD," a student may repeat a course in which the previously received grade was "C-," "D+," "D," "D-," "F," "AUD" or "NC." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy.
- With the dean's permission, a student may substitute another course if the previous course is no longer offered. Courses must be repeated at The University of Akron.
- Grades for all attempts at a course will appear on the student's official academic record.
- Only the grade for the last attempt will be used in the calculation of graduation grade-point average.
- All grades for attempts at a course will be used in grade-point calculation for the purpose of determining graduation with honors and class standing.
- For purposes of this section, credit for this course or its equivalent will apply only once toward meeting degree requirements.

### Academic Reassessment

An undergraduate student who has not attended The University of Akron for at least three calendar years and re-enrolls and maintains a grade-point average of at least 2.50 or better for the first 24 credits may petition the Dean to delete from the grade-point average the grades attained under the student's previous enrollment at The University of Akron.

This policy is to apply only to the grade-point average. All grades will remain on the student's official academic record. A student may utilize this academic reassessment policy only once.

In the determination of graduation with honors and class standing, all grades obtained at The University of Akron shall be used in the calculations.

Once these criteria are met, the student petitions the dean to delete from the grade-point average the grades obtained under the previous enrollment. Reassessment affects the grade-point average only; grades remain on the student's official academic record and are part of the calculation in determining graduation with honors and class standing.

### Academic Dishonesty

Students at The University of Akron are an essential part of the academic community, and enjoy substantial freedom within the framework of the educational objectives of the institution. The freedom necessary for learning in a community so rich in diversity and achieving success toward our educational objectives requires high standards of academic integrity. Academic dishonesty has no place in an institution of advanced learning. The University community is governed by the policies and regulations contained within the University Rules and Regulations Concerning Campus Conduct and Student Discipline Procedures available in the Office of Student Discipline, Gardner Student Center 104, (216) 972-7021.

The University of Akron considers academic integrity an essential part of each student's personal and intellectual growth. Instances of academic dishonesty are addressed consistently. All members of the community contribute actively to building a strong reputation of academic excellence and integrity at The University of Akron.

It is each student's responsibility to know what constitutes academic dishonesty and to seek clarification directly from the instructor if necessary. Examples of academic dishonesty include, but are not limited to:

- Submission of an assignment as the student's original work that is entirely or partly the work of another person.
- Failure to appropriately cite references from published or unpublished works or print/non-print materials.
- Unauthorized copying of an assignment in computer programming, or the unauthorized examination or view of the computer, specifically during examinations.
- Possession and/or unauthorized use of tests, notes, books, calculators or formulas stored in calculators not authorized by the instructor during an examination.
- Providing and/or receiving information from another student other than the instructor, by any verbal or written means.
- Observing or assisting another student's work.
- Violation of the procedures prescribed by the professor to protect the integrity of the examination.
- Cooperation with a person involved in academic misconduct.

A student who has been accused of academic dishonesty will be asked to meet with the course instructor. The matter can be resolved informally at the College level and/or an academic sanction can be imposed. If the student opposes the decision, he/she may appeal to the College Dean. If the matter is referred to the Office of Student Discipline, an informal meeting will occur and, if substantial evidence exists, the office has the authority to take formal action against the student including, but not limited to, suspension or dismissal from the University. A more detailed discussion of these procedures can be found in the University Rules and Regulations Concerning Campus Conduct and Student Discipline Procedures.

## Credit/Noncredit Option (undergraduate and postbaccalaureate only)

A student who takes a course on a "credit" or "noncredit" (CR/NC) basis, and who earns a grade equivalent of "A" through "C-," shall receive credit ("CR") for the course and have the grade, "CR," placed on the permanent record; a grade equivalent of "D+" through "F" will be recorded with the noncredit grade, "NC."

For the baccalaureate degree, no more than 16 credits of non-language courses and no more than 20 credits in total (including language courses) is permitted to be taken on a CR/NC basis. (For the associate degree, no more than eight credits of non-language courses and no more than 10 credits in total (including language courses).)

A student is eligible for the CR/NC option if the student has:

- completed 50% of the number of credits required for a degree;
- a GPA of at least 2.30; and
- the consent of an adviser.

The CR/NC option is available **only** at the time of registration for the course. After the first week of the term or first two days of a summer session, the status can not be changed. The registrar will notify the instructor of those students utilizing the CR/NC option by means of the final class list.

Courses that **can** be taken on a CR/NC basis:

- one free elective (not in major field) course per term;
- any first- or second-year foreign language course at any time, regardless of grade-point average.

Courses that **can not** be taken CR/NC:

- any General Education courses
- courses required by colleges and departments of all undergraduate majors

Courses for which "CR" is awarded will be counted as hours completed only; courses for which "NC" is awarded shall not be counted as hours attempted; in neither case shall "CR" or "NC" be considered in calculating grade-point average, but in both instances the course shall be entered on the student's official academic record.

A student may repeat a course for credit (CR), or a grade (A-F) after receiving a grade of "NC."

A college may designate in the printed schedule, on an annual basis, a course as not available to be taken on a "CR/NC" basis.

A student taking a course on a noncredit basis is expected to meet the full requirements of the course as required by the instructor.

A student can not raise a grade through re-examination.

## Audit Policy

A student choosing to audit a course must be admitted and indicate audit at the time of registration. The student pays the enrollment fee and may be expected to do all the work prescribed for students taking the course for credit, except that of taking the examination. Any faculty member may initiate withdrawal for a student not meeting these expectations.



## ALTERNATIVE CREDIT OPTIONS

### Advanced Placement Credit

Many high schools offer special Advanced Placement courses through the auspices of the Educational Testing Service for possible college credit. By enrolling in such courses during high school, and taking the Advanced Placement Tests at the end of each course, high school students may earn undergraduate credits in a number of different academic areas. The test score required to receive credit for a specific course is determined by the Academic Department in which the course is offered. Credits earned in this manner are included in the total credits completed, but are not assigned a grade and do not count in the quality-point ratio, class standing, or graduation with honors calculations. Students must take the tests while they are attending their high school. It is not possible to take the tests once a student is enrolled at The University of Akron. The following table lists disciplines available for Advanced Placement testing, scores required for accruing credit, and courses at The University of Akron for which credit may be earned.

Discipline	Required Score	Course	Credits
<b>Art History</b>	4 or 5	7100:100 Survey of Art History I	4
		7100:101 Survey of Art History II	4
<b>Art:Studio</b>	4 or 5	7100:____ (One studio course in a specific area of art)	3
<b>Biology</b>	4 or 5 (3 prior to 1988)	3100:111 Principles of Biology	4
		3100:112 Principles of Biology	4
<b>Biology</b>	3 (non-science majors only)	3100:100 Nature Study: Plants	3
		3100:101 Nature Study: Animals	3
		3100:105 Introduction to Ecology	2
<b>Calculus AB</b>	4 or 5 (3 prior to 1991) 3 (2 prior to 1991)	3450:149 Precalculus Mathematics	4
		3450:215 Concepts of Calculus I	4
		OR	
		3450:149 Precalculus Mathematics 3450:221 Analytical Geometry - Calculus I	4
<b>Calculus BC</b>	4 or 5 (3 prior to 1991)	3450:149 Precalculus Mathematics	4
		3450:215 Concepts of Calculus I	4
		3450:216 Concepts of Calculus II	4
		OR	
		3450:149 Precalculus Mathematics 3450:221 Analytical Geometry - Calculus I 3450:222 Analytical Geometry - Calculus II	4
<b>Chemistry</b>	3, 4, or 5	3150:151 Principles of Chemistry I	3
		3150:152 Principles of Chemistry I Lab	1
		3150:153 Principles of Chemistry II	3
		3150:154 Quantitative Analysis	2
<b>Computer Science</b>	3, 4, or 5	3460:205 Introduction to Pascal Programming	3
<b>Economics</b>	3, 4, or 5	3250:200 Principles of Microeconomics	3
		OR	
		3250:201 Principles of Macroeconomics	3
<b>English</b>	3 or 4	3300:111 English Composition I	4
<b>English</b>	5	3300:111 English Composition I	4
		3300:112 English Composition II	3
<b>History/American</b>	4 or 5 (3 prior to 1987)	3400:250 U.S. History to 1877	4
		3400:251 U.S. History since 1877	4
<b>History/European</b>	4 or 5 (3 prior to 1987)	3400:225 Europe: Renaissance thru the 18th Century	4
		3400:226 Europe: 19th and 20th Centuries	4
<b>Latin</b>	3, 4, or 5	3220:121 Beginning Latin I	4
		3220:122 Beginning Latin II	4
<b>Modern Languages</b>	3, 4, or 5	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
(French depends on Form/with consultation)	OR	3520:101 Beginning French I	4
		3520:102 Beginning French II	4
OR	OR	3530:101 Beginning German I	4
		3530:102 Beginning German II	4
<b>Physics</b>	3, 4, or 5	3650:261 Physics for the Life Sciences I	4
		3650:262 Physics for the Life Sciences II	4
OR	OR	3650:291 Elementary Classical Physics I	4
		3650:292 Elementary Classical Physics II	4
<b>Political Science/ American Government</b>	4 or 5 (3 prior to 1990)	3700:100 Government and Politics in the U.S.	4
<b>Political Science/ Comparative Politics</b>	4 or 5 (3 prior to 1990)	3700:300 Comparative Politics	4
<b>Psychology</b>	4 or 5	3750:100 Introduction to Psychology	3

## Bypassed Credit

Certain courses designated in this Bulletin by each department enable a student to earn "bypassed" credit. A student who completes such a course with a grade of "C" or better is entitled to credit for designated prerequisite courses which carry the same departmental code number. Credit for such bypassed prerequisites shall be included in the total credits earned but shall not count in the quality point ratio, class standing or hours required for graduation with honors. Bypassed credit is not awarded on the basis of completing a course either credit-by-examination or credit/noncredit.

Discipline	Course	Prerequisite	Approved for Bypassed Credit	
<b>Community and Technical College</b>				
Mathematics	2030:152	2030:151	2030:151	
	2030:153	2030:152	2030:152	
	2030:154	2030:153	2030:153	
	2030:255	2030:154	2030:154	
	2030:356	2030:255	2030:255	
Office Administration	2540:151	2540:150	2540:150	
	2540:253	2540:151	2540:150,1	
	2540:173	2540:171	2540:171	
<b>Buchtel College of Arts and Sciences</b>				
Classics	3210:122	3210:121	3210:121	
	3210:223	3210:121,2	3210:121,2	
	3210:224	3210:121,2,223	3210:121,2,223	
	3210:303	3210:121,2,223,4	3210:121,2,223,4	
	3210:304	3210:121,2,223,4	3210:121,2,223,4	
	3220:122	3220:121	3220:121	
	3220:223	3220:121,2	3220:121,2	
	3220:224	3220:121,2,223	3220:121,2,223	
	3220:303	3220:121,2,223,4	3220:121,2,223,4	
	3220:304	3220:121,2,223,4	3220:121,2,223,4	
	Economics	3250:400	3250:201	3250:201
		3250:410	3250:200	3250:200
	English	3300:112*	3300:111	3300:111
	Geography and Planning	3350:314	3350:310	3350:310
3350:442		3350:341	3350:341	
3350:444		3350:341	3350:341	
3350:495		3350:310	3350:310	
Mathematical Sciences	3450:215	3450:145 or 149	3450:145	
	3450:216	3450:215	3450:215	
	3450:221	3450:149	3450:149	
	3450:222	3450:221	3450:149,221	
	3450:223	3450:222	3450:149,221,2	
	3460:210	3460:209,3450:208	3460:205 or 209	
	3470:262	3470:261	3470:261	
	3470:253	3470:261	3470:261	
	Modern Languages	3520:102	3520:101	3520:101
		3520:201 or 207	3520:102	3520:101,2
3520:202		3520:201	3520:101,2,201	
3520:208		3520:201 or 207	3520:101,2,201 or 207	
3520:301,2,5,6		3520:202	3520:101,2,201,2	
3520:309,10,11		3520:302 or 306	3520:101,2,201,2	
3520:312,351,2,313,401		3520:202	3520:101,2,201,2	
3520:403,4		3520:302	3520:101,2,201,2	
3520:407,411,415,419,427,429,450		3520:302 or 306	3520:101,2,201,2	
3530:102		3530:101	3530:101	
3530:201 or 207		3530:102	3520:101,2	
3530:202		3530:201	3530:101,2,201	
3530:208		3530:201 or 207	3530:101,2,201 or 207	
3530:301,2,305,6		3530:202	3530:101,2,201,2	
351,2		3530:302	3530:101,2,201,2	
3530:403,4		3530:302	3530:101,2,201,2	
3530:406,7,419,20,431,2,435,6,439,440		3530:302 or 306	3530:101,2,201,2	
3550:102		3550:101	3550:101	
3550:201 or 207		3550:102	3550:101,2	
3550:202		3550:201	3550:101,2,201	
3550:208	3550:201 or 207	3550:101,2,201 or 207		
3550:301,2,305,6	3550:202	3550:101,2,201,2		
3570:102	3570:101	3570:101		
3570:201 or 207	3570:102	3570:101,2		
3570:202	3570:201	3570:101,2,201		
3570:208	3570:201 or 207	3570:101,2,201 or 207		

Course	Prerequisite	Approved for Bypassed Credit
Modern Languages, cont.		
3570:301,2,305,6,309,10	3570:202	3570:101,2,201,2
3570:403,4	3570:302	3570:101,2,201,2
3570:420,1	3570:301 or 302	3570:101,2,201,2
3570:427,8	3570:202	3570:101,2,201,2
3570:439	3570:404	3570:101,2,201,2
3580:102	3580:101	3580:101
3580:201 or 207	3580:102	3580:101,102
3580:202	3580:201	3580:101,2,201
3580:208	3580:201 or 207	3580:101,2,201 or 207
3580:301,2,305,6	3580:202	3580:101,2,201,2
3580:403,5,6	3580:302	3580:101,2,201,2
3580:407,8	3580:302 or 306	3580:101,2,201,2
3580:409,10,11	3580:302	3580:101,2,201,2
3580:415,419	3580:302 or 306	3580:101,2,201,2
3580:422	3580:202	3580:101,2,201,2
3580:423,427,8,9	3580:302 or 306	3580:101,2,201,2
<b>College of Engineering</b>		
4200:200	4200:120	4200:120
<b>College of Fine and Applied Arts</b>		
Communicative Disorders		
7700:102	7700:101	7700:101
7700:201	7700:102	7700:101,2
7700:202	7700:201	7700:101,2,201
<b>College of Nursing BSN-RN Sequence</b> (Limited to Licensed Registered Nurses)		
8200:446	8200:336,405 415,435, 440	8200:205,215,315 330,350,360,370 380,410
<b>College of Nursing MSN-RN Sequence</b>		
8200:470,485 470,485	8200:460,465	8200:101,205,210,220 8200:215,325,315,330 350,360,370,380,410

## College Level Examination Program (CLEP)

College Level Examination Program (CLEP) is a national program that offers the opportunity of obtaining college credit by examination. A variety of experiences may have prepared a person to earn college credit. Each institution determines which CLEP tests it will accept, the passing score, and the amount of credit that will be awarded. CLEP examinations for credit toward any degree are not permissible in the term before graduation. Credit by CLEP may not be used to repeat for change of grade.

CLEP tests are administered each month during the week ending with the third Friday of the month. Deadline for the registration form is always the second Friday of the month before the month in which the test is to be taken (5-week order period.) Contact the Counseling and Testing Center at (216) 972-7082 for more information.

The following guidelines outline the terms under which The University of Akron will accept the results of specified CLEP tests for college credit.

General Education Course	Credits	CLEP Equivalent
<b>English Requirement</b>		
3300:111 English Composition I	3	CLEP Subject Examination in English, plus essay. (Must receive minimum scale of 60 on the subject examination and pass the essay.)
<b>Sociology Requirement</b>		
3850:100 Intro to Sociology	4	Clep Subject Examination in Introductory Sociology. (Must receive minimum scale of 50 on the subject examination.)
<b>Macroeconomics</b>		
3250:201 Princ. of Macroeconomics	3	Clep Subject Examination in Introductory Macroeconomics. (Must receive minimum scale of 50 on the subject examination.)
<b>Government &amp; Politics in the U.S.</b>		
3700:100 Govt. and Politics in the U.S.	4	Clep subject examination in American Government. (Must receive minimum scale of 50 on the subject examination.)
<b>Natural Science Requirement, Biology</b>		
3100:103 Natural Science Biology	4	Clep subject examination in Biology. (Must receive minimum scale of 50 on the subject examination.)

\* An ACT English score of 28 and an SAT verbal score of 610 is needed to enroll in 3300:112 without the prerequisite.

## College Level Examination Program (CLEP), cont.

General Education Course	Credits	CLEP Equivalent
<b>Natural Science Requirement, Chemistry</b>		
3150:100 Chemistry and Society	3	CLEP subject examination in General Chemistry. (Must receive a minimum scale of 50 on the subject examination.)
3150:151 Principles of Chemistry I and 3150:129 Intro to General Organic and Biochemistry I	4	
	4	
<b>Western Cultural Traditions Requirement</b>		
3400:210/211 Humanities in the Western Tradition I/II	8	CLEP subject examination in Humanities. subject exam in Western Civilization I&II. (Must receive a minimum scale of 50 on each examination.)
NOTE: Essay will be arranged by instructor and will count for 50% of the test.		
<b>Mathematics Requirement</b>		
3450:145 College Algebra	4	CLEP subject examination in College Algebra. (Must receive a minimum scale of 50 on the subject examination.)
<b>Psychology</b>		
3750:100 Introduction to Psychology	3	CLEP subject examination in Psychology. (Must receive a minimum scale of 50 on the subject examination.)

## Credit by Examination

A student interested in earning credits by special examination may do so with the permission of the dean of the student's college and the dean of the college in which a particular course is offered and by payment of a special examination fee. The grade obtained in such an examination is recorded on the student's permanent record. Credit by examination is not permitted in the semester before graduation. Credit by examination may not be used to repeat for change of grade.

## International Baccalaureate

The University of Akron recognizes the academic quality of the International Baccalaureate (IB) programme and the efforts of students enrolled in IB coursework by awarding advanced-standing credit for the completion of the International Baccalaureate Diploma. Higher level examination scores are considered for departmental credit in the areas of French, Spanish, German, Geography, Latin, Greek, Economics, Chemistry, History, English, Social Anthropology, Mathematics, and Music. Although minimum scores for the awarding of credit vary by subject area, generally scores of four or five are sufficient. No credit is awarded for IB Subsidiary examinations.

For additional information, contact the University College Dean's Office, located at Spicer Hall 120, (216) 972-7066.

## Military Credit

The University of Akron awards credit for military experience based upon recommendations by the Commission on Accreditation of Services of the American Council of Education. Block credit is awarded for Basic Training as well as one credit for physical education. Applicability of this credit for a student's degree program will be determined by established University procedures.

In order for credit to be awarded, the student must submit a veteran's DD214 form. In addition, materials such as Course Completion Certificates or Army/ACE Registry Transcript can be used to ensure proper and complete awarding of credit. Documents should be submitted to the Department of Transfer and Articulation Services.

## Tech Prep

Tech Prep is a sequence of Study beginning in high school and continuing through at least the associate degree level. It prepares students for high-skill technical occupations supported by regional businesses and industries. Tech Prep integrates academics and occupational training and exposes students to work-world situations throughout the 2+2 program. For more information, contact Jan Eley, Coordinator of Tech Prep, Akron Area Tech Prep Consortium, at (216) 972-7026.

## Transfer Credit

Coursework taken at an institution of higher education in the United States which is fully accredited or has been granted candidacy status by Middle States Association of Colleges and Schools/Commission on Higher Education (MSA/CHE); New England Association of Schools and Colleges (NEASC); North Central Association of Colleges and Schools (NCA); Northwest Association of Schools and Colleges (NASC); Southern Association of Colleges and Schools

Commission on Colleges (SACS); Western Association of Schools and Colleges Accrediting Commission for Senior Colleges (WASC-Sr.); Western Association of Schools and Colleges Accrediting Commission for Community and Junior Colleges (WASC-Jr.) as designated in Accredited Institutions of Postsecondary Education Programs/Candidates as published for The Council on Post secondary Accreditation (COPA) by the American Council on Education will be listed on The University of Akron official academic record. Each course will reflect the course number, title, grade, and credit value; no grade-point value will appear on the record and no grade-point average will be calculated for the coursework listed; however, grade-point average may be considered for purposes of evaluating, ranking, or otherwise determining admissibility to the University or to specific programs. In addition, the name of the institution as well as the time period during which the courses were taken, will be listed on The University of Akron official academic record.

For courses that have been taken at an institution of higher education noted in the reference document above, the dean of the college in which the student intends to obtain a degree will specify which courses listed, other than general studies, will apply toward the degree requirements at the University. This specification will be made at the time the student enters the degree-granting college. The Department of Transfer and Articulation Services will specify which courses listed will apply toward the general education requirements when the student enters the University.

CLEP or Advanced Placement credit posted on transcripts from previous institutions is eligible for credit at The University of Akron.

## COURSE NUMBERING SYSTEM

Each course at the University has two numbers. One designates the college and department of which it is a part; one specifies the subject matter of the particular course. For instance:

3300:220 English Literature

In the above example, the first four digits of the number (3300) indicate the college and department. In this case, 3000 represents the Buchtel College of Arts and Sciences; 300 refers to the Department of English. The second set of digits (220) following the colon, indicates exactly which course in the Department of English is being specified. The course number also indicates the level at which the course is being taught and the point at which the student is ready to take the course.

An explanation of the course numbering system follows:

100-199	First-year-level courses
200-299	Second-year-level courses
300-399	Third-year-level courses
400-499	Fourth-year-level courses
500-699	Master's-level courses
600-799	J.D.-level courses
700-899	Doctoral-level courses

When approved 400-level undergraduate courses are taken for graduate credit, they become 500-level courses. A student must apply for and be admitted to the Graduate School to receive graduate credit.

**NOTE:** Courses listed in the Schedule of Classes published for each term contain an additional three-digit number indicating the specific section(s) offered.

## GRADUATION REQUIREMENTS

### Requirements for Baccalaureate and Associate Degrees

A candidate for the baccalaureate or the associate degree must:

- File an application for graduation with the registrar. If the candidate plans to complete degree requirements at the end of fall semester, submit an application by or before May 15. If the plan is to complete degree requirements at the end of spring semester, submit an application by or before September 15. Submit an application by or before February 15 for Summer Commencement.
- Earn a minimum 2.00 grade-point average as computed by the Office of the Registrar for work attempted at the University consistent with the Repeating Courses policy. The grade-point average achieved at the time of completion of requirements for a degree will include repeated and reassessed courses which will be used to calculate rank in class and honors.
- Meet all degree requirements which are in force at the time a transfer is made to a degree-granting college. If the student should transfer to another major, then the requirements should be those in effect at the time of the transfer. For

a student enrolled in an associate degree program in the Community and Technical College, the requirements shall be those in effect upon entrance into the program.

- Be approved for graduation by appropriate college faculty, Faculty Senate, and Board of Trustees.
- Complete the requirements for a degree in not more than five calendar years from the date of transfer, as defined below. In the event the student fails to complete the degree requirements within five calendar years from the date of transfer, the University reserves the right to make changes in the number of credits and/or courses required for a degree.
- The date of transfer for a student in a baccalaureate program will be the date that the student is accepted by the degree-granting college. For a student enrolled in an associate degree program in the Community and Technical College, the date of transfer refers to the date of entrance into the program.
- Earn the last 32 credits in the baccalaureate degree total or 16 credits in the associate degree total in residence at The University of Akron unless excused in writing by the dean of the college in which the student is enrolled.
- Complete a minimum of 32 earned credits in the baccalaureate degree total or a minimum of 16 earned credits in the degree total in residence at The University of Akron.
- If a student who has transferred from another institution wishes to present for the student's major fewer than 14 credits earned at The University of Akron, written permission of both the dean and head of the department is required.
- Discharge all other obligations at the University.

### Requirements for Additional Baccalaureate and Associate Degrees

- Meet requirements given in **Section 3**, Requirements for Baccalaureate and Associate Degrees.
- Earn a minimum of 32 credits which have not counted toward the first baccalaureate degree or 16 credits which have not counted toward the first associate degree.
- Earn the above credits in residence at the University.

### Change of Requirements

To accomplish its objectives better, the University reserves the right to alter, amend, or revoke any rule or regulation. The policy of the University is to give advance notice of such change, whenever feasible.

Unless the change in a rule or regulation specifies otherwise, it shall become effective immediately with respect to the student who subsequently enters the University, whatever the date of matriculation.

Without limiting the generality of its power to alter, amend, or revoke rules and regulations, the University reserves the right to make changes in degree requirements of the student enrolled prior to the change by:

- Altering the number of credits and/or courses required in a major field of study.
- Deleting courses.
- Amending courses by increasing or decreasing the credits of specific courses, or by varying the content of specific courses.
- Offering substitute courses in same/or cognate fields.

The dean of the college, in consultation with the department or division head of the student's major field of study, may grant waivers in writing if a change in rules affecting degree requirements is unduly hard on a student enrolled before the change was effective. The action of the dean of the college in granting or refusing a waiver must be reviewed by the senior vice president and provost on his or her own motion, or at the request of the dean of the college of the student affected, or at the request of the student affected.

## Credit and Grade-Point Requirements for Graduation Listed by College and Degrees Granted

	Min. Cr.	Min. Grade-Point Ave. Req.
<b>Buchtel College of Arts and Sciences</b>		
Bachelor of Arts	128	2.00
Bachelor of Science	128	2.00
Bachelor of Science (Chemistry)	128	2.30
Bachelor of Science in Cytotechnology	128	2.00
Bachelor of Science in Geography/Cartography	128	2.00
Bachelor of Science in Labor Economics	128	2.00
Bachelor of Science in Medical Technology	128	2.00
Bachelor of Science in Political Science/Criminal Justice	131	2.20
Bachelor of Arts in Geography/Travel and Tourism	128	2.00
Bachelor of Arts (Political Science)	128	2.20
Bachelor of Arts in Political Science/Public Policy Management	128	2.20
<b>College of Engineering*</b>		
Bachelor of Science in Chemical Engineering	137	2.00
Bachelor of Science in Civil Engineering	137	2.00
Bachelor of Science in Electrical Engineering	137	2.00
Bachelor of Science in Engineering	137	2.00
Bachelor of Science in Mechanical Engineering	137	2.00
Bachelor of Construction Technology	137	2.00
<b>College of Education**</b>		
Bachelor of Arts in Education	128	2.50
Bachelor of Science in Education	128	2.50
Bachelor of Science in Technical Education	128	2.50
<b>College of Business Administration***</b>		
Bachelor of Science in Accounting	128	2.00
Bachelor of Science in Business Administration	128	2.00
Bachelor of Science in Business Administration/Advertising	128	2.00
Bachelor of Science in Business Administration/Finance	128	2.00
Bachelor of Science in Business Administration/Marketing	128	2.00
Bachelor of Science in Industrial Management	128	2.00
<b>College of Fine and Applied Arts</b>		
Bachelor of Arts in Visual Arts		
Studio Art	131	2.00
Art History	131	2.00
Bachelor of Fine Arts in Studio Art	131	2.00
Bachelor of Arts		
Family and Child Development	128	2.00
Food Science	128	2.00
Pre-Kindergarten	128	2.00
Child-Life Specialist	128	2.00
Bachelor of Arts in Clothing, Textiles, and Interiors		
Business Option	131	2.00
Interior Design Option	131	2.00
Theatre Option	131	2.00
Bachelor of Science in Dietetics	137-142	2.00
Bachelor of Science in Home Economics Education	145-148	2.00
Bachelor of Arts in Music	131	2.00
Bachelor of Music		
Performance	128-144	2.00
History and Literature	133	2.00
Theory/Composition	133	2.00
Jazz Studies	135	2.00
Music Education	135-144	2.00
Bachelor of Arts in Communication <sup>†</sup>	128	2.00
Business and Organizational Communication <sup>†</sup>	128	2.00
Interpersonal and Public <sup>†</sup>	128	2.00
Mass Media-Communication <sup>†</sup>	128	2.00
Bachelor of Arts in Communicative Disorders	128	2.00
Bachelor of Arts in Social Work	128	2.00
Bachelor of Arts in Theatre Arts	128	2.00
Bachelor of Arts in Dance	131	2.00
Bachelor of Fine Arts in Dance	132	2.00

\* An engineering grade-point average of 2.00 is required in all engineering courses attempted (4XXX prefix).

\*\* Grade-point average of 2.50, effective July 1, 1991, for entering freshmen.

\*\*\* A separate 2.00 is required in the major and a separate 2.00 is required in all business and economics courses.

† Grade-point average of 2.00 overall, and a separate GPA of 2.30 in all courses taken in the School of Communication.

### Credit and Grade-Point Requirements for Graduation Listed by College and Degrees Granted, cont.

College of Nursing	Min. Cr.	Min. Grade-Point Avg. Req.
Bachelor of Science in Nursing	134	2.30
<b>Community and Technical College</b>		
Associate of Arts	64	2.00
Associate of Individualized Study	64	2.00
Associate of Labor Studies (inactive)	64	2.00
Associate of Technical Studies in:		
Automotive Technology (ASSET)	64	2.00
Associate of Applied Business in:		
Business Management Technology	64	2.00
Commercial Art (Inactive)	64	2.00
Computer Programming Technology	64	2.00
Hospitality Management in:		
Restaurant Management	67	2.00
Culinary Arts	72	2.00
Hotel/Motel Management (Inactive)	68	2.00
Hospitality Marketing/Sales	64	2.00
Marketing and Sales Technology	64	2.00
Office Administration in:		
Administrative Assistant	66	2.00
Executive Secretarial (Inactive)	68	2.00
Office Information Management	67	2.00
Legal Secretarial	66	2.00
International Secretarial	70	2.00
Office Services Technology (inactive)	64	2.00
Real Estate (Inactive)	64	2.00
Transportation	64	2.00
Associate of Applied Science in:		
American Sign Language Interpreting and Transliterating Technology	74	2.00
Community Services Technology	64	2.00
Criminal Justice Technology	64	2.00
Drafting & Computer Drafting Technology	68	2.00
Educational Technology	64	2.00
Electronic Engineering Technology	71	2.00
Electromechanical Service Technology (Inactive)	64	2.00
Fire Protection Technology	64	2.00
Histologic Technology	64	2.00
Legal Assisting Technology	70	2.00
Manufacturing Engineering Technology in:		
Computer-Aided Manufacturing	68	2.00
Industrial Supervision	64	2.00
Mechanical Engineering Technology	69	2.00
Medical Assisting Technology	68	2.00
Polymer Technology	68	2.00
Radiologic Technology	74	2.00
Respiratory Care	70	2.00
Surgical Assisting Technology in:		
Surgical Technologist	64	2.00
Surgeon's Assistant	74	2.00
Surveying and Construction Engineering Technology in:		
Construction Option	68	2.00
Surveying Option (Inactive)	68	2.00
Bachelor of Science in		
Automated Manufacturing Engineering Technology	136	2.00
Bachelor of Science in Electronic Engineering Technology	138	2.00
Bachelor of Science in Mechanical Engineering Technology	135	2.00
<b>Wayne College</b>		
Associate of Arts	64	2.00
Associate of Science	64	2.00
Associate of Technical Studies	64	2.00
Associate of Applied Business in:		
Business Management Technology in:		
Accounting Option	67	2.00
Data Management Option	70	2.00
General Business Option	64	2.00
Sales and Services Option	68	2.00
Office Administration in:		
Executive Assistant Option	65	2.00
Legal Secretary Option	64	2.00
Medical Secretary Option	64	2.00
Associate of Applied Science in:		
Environmental Health and Safety Technology	69	2.00
Microprocessor Service Technology	67	2.00
Social Services Technology	64	2.00

### Graduation with Honors

For a student who entered the University after December 1981 who is being awarded an initial baccalaureate degree and who has completed 60 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
Summa Cum Laude.....	3.80 or higher
Magna Cum Laude.....	between 3.60 and 3.79
Cum Laude.....	between 3.40 and 3.59

For a student who entered the University after December 1981 who is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
with highest distinction.....	3.80 or higher
with high distinction.....	between 3.60 and 3.79
with distinction.....	between 3.40 and 3.59

For a student who entered the University prior to January 1982 and is being awarded an initial baccalaureate degree and who has completed 60 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
Summa Cum Laude.....	3.75 or higher
Magna Cum Laude.....	between 3.50 and 3.74
Cum Laude.....	between 3.25 and 3.49

For a student who entered the University prior to January 1982 and is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
with distinction.....	3.25 or higher



# Fees and Expenses

## Fees subject to change without notice

## Typical Annual Student Expenses

Despite the willingness of taxpayers and generous friends of the University to help support higher education, some portion of this total expense must be borne by the student. Typical costs for one year (September through May) based on an average academic load of 32 credits for the two semesters are as follows:

	<i>Commuting Residents of Ohio</i>	<i>Residents of Ohio Living on Campus</i>	<i>Non-Ohio Residents*</i>
Undergraduate Tuition and Fees (regular load)	\$3,384	\$3,384	\$8,770
Books (average costs)	350	350	350
Room and Board	—	4,062	4,062
	<u>\$3,734</u>	<u>\$7,796</u>	<u>\$13,182</u>

Following are comprehensively outlined fees for students at the University who are studying for credit and noncredit in all areas of instruction. Included also are the additional expenses required for special academic services available to students, and other miscellaneous fees, such as application and graduation fees.

It is the responsibility of the student to know the correct amount of all fees, including the non-Ohio resident surcharge.

In any question concerning fees, surcharge, or residence, it is the responsibility of the student, parents, or court-appointed guardian, to furnish such proof as may be required by The University of Akron. A student who is in doubt about residency status should consult with the University registrar.

It is the responsibility of the registrar to assess fees and surcharges at the time of registration; information given by the student at that time is used in the assessment. Each registration is later audited by the University auditor, and appropriate additional charges or refunds will be made.

All fees and surcharges are due at the time of registration or on the specified fee payment deadline. The status of the student as of the opening day of the semester or session for which registered will determine the final, correct amount of fees and surcharges.



## Tuition and Fees

- Tuition:
  - Undergraduate
    - 1-12.5 credits \$118.50 per credit
    - 13-16 credits \$1,530.60 per semester
    - Over 16 credits \$1,530.60 + \$118.50 per credit
- Tuition Surcharge:
  - (Nonresidents of Ohio pay the surcharge in addition to the instructional fee)\*
    - Undergraduate
      - One or more credits \$168.30 per credit
- General Fee:
  - Undergraduate \$12.55 per credit to a maximum of \$161.35 per semester

## Admission Application Fee

(Nonrefundable)	
Undergraduate	\$25
Entering postbaccalaureate or graduate	\$25
(Note: fee deferred for recruited graduate minority students.)	
Transient students (first enrollment only)	\$25
International Students	\$50

## Orientation Program Fees

Traditional Freshman Program	
Student Commuting to Program	\$55
Student Staying in Residence Halls	\$65
Transfer Student and Non-Traditional Student Program	
One-day Program	\$30
Traditional Freshman Parents Program	
Two-day Program, Parent Staying in Residence Halls	\$55
Two-day Program, Parent Commuting	\$40
One-day Program, Parent attending one-day program	\$30

## Other Registration and Related Fees

Late Registration Fee	
Charged to student who has not completed registration and paid fees before close of open registration or by final date of payment	\$25
Delayed Registration Fee	\$10
Assessed for any continuing student (enrolled immediately preceding regular semester) who registers other than during the time specified for his or her rank/level group.	
Schedule Adjustment Fee	
Assessed for any schedule change form processed in person after an initial registration occurs for a particular term.	\$5
Transcripts	
First transcript requested	\$4
Cost for two additional transcripts ordered at the same time	\$2
Additional transcripts (excess of four) requested at same time	\$2
Additional "Speedy" Transcript Fee	\$10
Transcript Evaluation for Certification Fee	\$15
Refunds Retainer Fee	
Charged on partial refunds (maximum of \$50)	\$5/ unit
Co-op course fee	\$55
International Program Fees	
Visa Form (spouse and/or dependents)	\$50
Practical Training (non-enrolled students)	\$35
Study Abroad (non-refundable deposit)	\$50

## Alternative Credit Fees

Advanced Placement Credit, per credit awarded	\$5
Bypassed credit, per credit	\$5
CLEP, per credit awarded	\$5
Credit by Examination (undergraduate and postbaccalaureate) per credit	\$21

## Graduation Fees

(nonrefundable)	
Each degree	\$30
except all RN/BSN/MSN recipients, who pay one single fee of \$30.	
Each Jussis Doctor degree	\$40
Graduation Late Application Fee	\$10
Minor Application Fee and/or Second Major Application Fee	\$5

\* See The University of Akron Residency Requirements defining residency in this section.

## Miscellaneous Fees

### Art Department Charge

Material usage charged for the purchase of art materials retained by the student that are too heavy, too large, or too dirty to be handled by the Bookstore At cost

### Center for Child Development (Child care facility)

Registration:	
Academic year	\$30
Summer session	\$10
Both summer sessions	\$15
Insurance:	
Child, per academic year	\$20
Child, per summer (all ages)	\$12
Enrollment:	
Full time, per week (after 45 hours, charged hourly)	\$95
Hourly for fewer than 15 hours per week for faculty/staff (as of Fall 1994)	\$3.00
Hourly for UA student families only	\$2.75
Hourly for 15 hours or more per week for faculty/staff (as of Fall 1994)	\$3.00
Schedule Changes	\$2.75
Subsequent Changes	\$5

### Center for Nursing

Initial Comprehensive Bio/Psycho/Social History	\$15
Individual 50-minute Sessions (1/4, 1/2, and extended sessions all available)	\$40
Group Sessions (per session, per member)	\$20
Family Sessions (three or more persons)	\$60
Couple Sessions (per session)	\$50
Special Services	
Cholesterol	\$10
Percent Body Fat Testing	\$10
Tuberculosis Screening	\$15
Minimum Fee	\$2

### Counseling, Testing and Career Center

ACT Test	\$25
ACT Special Testing	\$30
College Level Placement Exam Program (CLEP)	\$47
Correspondence Testing	\$12/hr
Education Admissions Battery	\$15
Miller Analogies Test	\$37
Professional Consultation Fee per hour	\$80
Pre-Professional Skills Test	\$87.50

### Dance Institute

Audition Fee	\$17
Academic Year (three sessions)	
Intermediate I	\$2,348
Intermediate II	\$2,348
Advanced	\$2,412
Advanced beginner	\$795
Beginner	\$530
Pre-schoolers	\$282
Adults - beginners to intermediate II	\$256
Performance	\$256
Summer (four weeks)	
Intermediate I	\$450
Intermediate II	\$551
Advanced	\$600
Advanced beginner	\$172
Beginner	\$172
Pre-schoolers	\$70
Adults - beginners to intermediate II	\$153
Performance	\$153

### Department of Special Programs and ICE

(Course charge based on number of Continuing Education Units.) \$41/CEU

### English Language Institute

Tuition fee, semester	\$2,650
8-week summer program	\$1,630
Application Fee	\$40
Materials fee, per course (minimum)	\$10 (\$7.50 for summer session)

### Health Services Allergy injections

(subsequent injections are \$1) \$5

### Howar House

Rental per event (non-University) (first 3 hours, \$100 each additional hour)	\$350
University departments and registered student organizations (first 3 hours, \$50 each additional hour)	\$100
Wedding or reception (first 3 hours, \$100 each additional hour)	\$350
Meetings (M, T, Th for 3 hrs. between 9 a.m.-3 p.m.)	
Non-University	\$100
University departments and registered student organizations	\$50

### I.D., replacement

\$5

### Instructional Material, Loss/Damage Deposit (refundable)

\$20

### "Insufficient Funds" or returned check charge and VISA/Mastercard Returns for Insufficient Funds

\$20

### International Programs

Visa Forms (Spouse and/or dependents)	\$50
Practical Training (non-enrolled students)	\$35
Study Abroad, non-refundable deposit	\$50

### Laboratory breakage and late service deposit (refundable)

\$15

### Liability Insurance Fee, Student Nursing

\$15

### Liability Insurance Fee, Allied Health Technology/Surgeon's Assistant

\$61.50

### Liability Insurance Fee, Allied Health Technology/Other than Surgeon's Assistant

\$15

### Library Fees

Overdue materials (plus \$1 fee if invoiced)	
UA students, faculty and staff (\$10 maximum)	.10/day
Non-University borrowers (\$10 maximum)	.25/day
Replacement	Cost plus \$20 surcharge
Photocopy (per copy, depending on machine used)	.05-.10
Microcopy (per copy, depending on machine used)	.10-.30
Research Service (1-hour minimum charged)	
UA students, faculty and staff	At cost
Others	\$60/hour, plus costs
Computer-Based Search Service (\$5 minimum, no refunds)	
UA students, faculty and staff	At cost
Others	\$25/hour plus costs

### Locker fee (\$3 refundable fall-spring semesters)

\$10

### Locker fee (\$3 refundable, spring semester only)

\$7

### Locker fee, physical education and Schrank Hall (\$3 refundable) per semester

\$7

### Ocasek Natatorium and Memorial Hall Pool

Group Rental Fees	
University groups during open building hours	No charge
exclusive or special use (per employee, per hour)	\$8.50/hr.
Community, individual or business rental	
25-yard lane in pool	\$7/hr
50-yard lane in pool	\$15/hr
Entire pool (swim team practice ONLY)	\$90/hr
Entire pool (swim meet or party)	\$110/hr
Swimming lessons Infant and Preschool (8 one-half hour sessions)	\$30
All other swimming lessons (8 one-half hour sessions)	\$25

### Placement Services

Mailing of professional credentials prepared and maintained by Placement Office for students and alumni to prospective employers.	\$4
Resume Xpert-Plus software	\$20
Registration Fee for alumni (covers 12-month cost of employer referrals)	\$25
Vacancy Bulletin subscription for alumni (12 issues)	\$25
Alumni Workshop	\$15

### Police Service Calls (for vehicle assistance)

\$10

### Police Report

Per report (as of 1/25/95)	no charge
Fingerprinting	\$5

### Speech and Hearing Center\*

Hearing Aid Evaluation, Selection, Orientation	\$175
Hearing Screening (per person)	\$15*
Minimum Fee	\$2
Speech/Language Screening	\$15
Therapy (per 1/2-hour session)	\$20
Hearing Evaluation	\$45
Counseling (per 1/2-hour session)	\$20
Special Testing (per hour)	\$50

Primary Services Delivered by Licensed Certified Speech and Language Pathologist and Audiologist\*

### Audiological Services\*

Minimum Fee	\$2
Hearing Evaluation	\$45
Hearing Aid Evaluation, Selection, Orientation	\$175
Hearing Screening (per person)	\$15*
Counseling (per 1/2-hour session)	\$20
Aural Rehab (per 1/2-hour session)	\$20
Interpreting (per hour)	\$40
Special Testing (per hour)	\$40
Swim Plugs/Ear Plugs	\$20

### Shooting Facility Use

Univ. depts. and registered student organizations	No charge
Public Agencies	
1 hour	\$35
4 hours	\$125
8 hours	\$200
Private Organizations	
1 hour	\$50
4 hours	\$150
8 hours	\$300

### Storage Drawer Rental for Mechanical Technology (\$2 refundable)

\$5

### Transcript evaluation for Teaching Certification Fee

\$15

### UAASC/Continuing Education

(Course charge based on number of Continuing Education Units.)	
One CEU (10.0 contact hours)	\$35-\$400
Transcript fee, first print	\$4
Each additional copy	\$2
Each duplicate of certificate of completion	\$4

\* The School of Communicative Disorders charges no fees for clinical services, except for screening, to students, full-time and part-time faculty and staff or their immediate families.

## Parking Fees

Student enrolled for 5 or more credits per semester	\$57.50
Student enrolled for less than 5 credits per semester	\$34.50
Summer session student, per session	\$20.50
Workshop participant	\$2 per day up to \$16 max
Off-campus Instruction Student	\$18.25
Temporary Permit (per week/per day)	\$5/\$1
Conference participant, per day	\$2
Commercial visitor, per semester	\$57.50
per week	\$5
per summer	\$35.50
Replacement parking permit service charge	\$5
Special University event parking, per event	\$3
Special non-Univ. event parking, per event	Up to \$5
Visiting Parking:	
meter, per hour	\$ .25
pre-arranged permit less than 4 hours	\$1
pre-arranged permit more than 4 hours	\$2
Lot A, per quarter hour (\$3 max)	\$ .25
Motorcycle if purchased in conjunction with regular vehicle permit:	
per semester	\$4
per summer session	\$4
Motorcycle if purchased as sole vehicle permit:	
per semester	\$25
per summer session	\$10

## Parking Fines:

For most infractions (Sections (J) (1) (A) through (J) (1) (K) of the Parking Regulations)	
If paid within 5 University business days	\$5
If paid thereafter	\$8
For ignoring parking attendant's directions or parking in handicapped space (Sections (J) (1) (L) and (J) (1) (M) of the Parking Regulations)	
If paid within 5 University business days	\$15
If paid thereafter	\$50
For displaying a false, altered, or forged permit	\$50
Boot Fee	\$20

## Course Materials, Computing Fees\*

For the following undergraduate courses, the fee noted will be assessed to cover the cost of instructional materials distributed by the instructor and computing fees:

Course Number	Course Title	Credits	Course Fee
<b>Community and Technical College</b>			
2020:222	Technical Report Writing	3	\$10
2020:224	Writing for Advertising	4	\$15
2030:161	Math for Modern Technology	4	\$5
2030:345	Basic Technology: Data Analysis	2	\$5
2210:111	Intro to Sign, Deafness, and Interpreting Services	3	\$15
2210:112	American Sign Language I	4	\$15
2210:114	ASL Semantics and Structure I	3	\$15
2210:122	American Sign Language II	4	\$15
2210:124	ASL Semantics and Structure II	3	\$15
2210:126	Advanced Fingerspelling and Numbers	2	\$15
2210:128	Profession of Interpreting	3	\$15
2210:232	American Sign Language III	4	\$15
2210:236	Consecutive Interpreting	4	\$15
2210:238	American Deaf Culture	3	\$15
2210:242	American Sign Language IV	4	\$15
2210:244	Simultaneous Interpreting	4	\$15
2210:246	Interpreter in Educational Setting	3	\$15
2210:248	Interpreting Practicum I	2	\$15
2210:252	Interpreting Practicum II	3	\$15
2210:254	Applied Ethics: Interpreting	4	\$15
2220:250	Criminal Case Management	6	\$20
2220:291	Special Topics: Criminal Justice	1-4	\$10
2220:293	Special Topics: Criminal Justice	1-4	\$30
2230:104	Fire Investigation Methods	3	\$20
2230:153	Principles of Fire Protection and Life Safety	3	\$20
2230:205	Fire Detection and Suppression Systems I	3	\$15
2230:206	Fire Detection and Suppression Systems II	3	\$15
2230:250	Hazardous Materials	4	\$25
2240:122	Introduction to Commercial Photography	3	\$25
2240:124	Design in Commercial Art	3	\$10
2240:130	Marker Rendering	3	\$5
2240:140	Typography and Lettering	3	\$10
2240:242	Advertising Layout Design	3	\$25
2240:245	Designing for Production	3	\$25
2240:247	Packaging Design	3	\$25
2240:248	Publication Design	3	\$25
2240:250	Advanced Commercial Photography	3	\$25
2240:252	Professional Photographic Practicum	3	\$25
2240:29	ST: Beginning Typesetting	1-3	\$25

\* Additional workshops and special topics courses offered on a rotation basis may include fees not listed here. Consult appropriate department for course material and computing fees for those classes.

Course Number	Course Title	Credits	Course Fee
2260:100	Introduction to Community Service	3	\$4
2260:150	Introduction to Gerontological Services	3	\$6
2260:260	Alcohol Use and Abuse	3	\$2
2260:261	Alcoholism Treatment	3	\$6
2260:262	Basic Helping Skills in Alcohol Problems	4	\$3
2260:263	Group Principles in Alcoholism	4	\$6
2260:278	Techniques of Community Work	4	\$7
2280:121	Fundamentals of Food Preparation I	4	\$70
2280:122	Fundamentals of Food Preparation II	4	\$70
2280:123	Meat Technology	2	\$55
2280:232	Dining Room Service and Training	2	\$15
2280:233	Restaurant Operations and Management	4	\$45
2280:261	Baking and Classical Desserts	3	\$50
2280:262	Classical Cuisine	3	\$55
2280:263	International Foods	2	\$50
2290:104	Basic Legal Research and Writing	3	\$30
2290:204	Advanced Legal Research	3	\$30
2300:122	Introduction to Commercial Photography	3	\$25
2300:160	Portrait/Fashion Photography	3	\$25
2300:170	Illustration/Advertising Photography	3	\$25
2300:230	Multi-Image Production	3	\$25
2300:250	Advertising and Commercial Photography	3	\$25
2300:260	Professional Photographic Practices	3	\$25
2420:212	Basic Accounting II	3	\$5
2420:213	Basic Accounting III	3	\$10
2420:217	Survey of Taxation	4	\$10
2440:120	Computer and Software Fundamentals	2	\$18
2440:121	Introduction to Programming Logic	2	\$5
2440:125	LOTUS 1-2-3	2	\$18
2440:130	BASIC Programming for Business	3	\$18
2440:131	Introduction to Programming	2	\$8
2440:132	Assembler Programming	2-3	\$8
2440:133	Structure Cobol Programming	2-3	\$12
2440:151	PC DOS Fundamentals	1	\$6
2440:220	Software Application for Business	2	\$12
2440:234	Advanced Cobol Programming	3	\$12
2440:235	Current Programming Topics	2	\$6
2440:239	RPG II Programming	2	\$8
2440:243	Information Center Practicum	3	\$5
2440:245	Introduction to dBase III+/IV	3	\$18
2440:247	Microcomputer Hardware and Software Selection	3	\$12
2440:251	Computer Applications Projects	5	\$22
2440:252	Job Control Language	2	\$8
2440:255	Introduction to Network Administration	3	\$120
2440:261	CICS Customer Information Control System	3	\$12
2440:263	Database Concepts	3	\$12
2440:267	4th Generation Language for Micros	3	\$18
2440:269	C Programming and UNIX	2	\$12
2440:270	Network Management I	4	\$190
2440:272	Network Technologies	2	\$100
2440:274	Network Service and Support	4	\$235
2440:276	Network Management II	4	\$220
2440:299	Workshop: Computer Programming	1-5	\$10
2520:221	AAF Ad Campaign I	2	\$5
2520:222	AAF Ad Campaign II	2	\$5
2540:125	Electronic Business Calculations	2	\$10
2540:129	Information/Records Management	3	\$20
2540:130	Introduction to Office Automation	4	\$20
2540:131	Computerized Document Control	4	\$20
2540:140	Keyboarding for Non-Majors	2	\$20
2540:141	PC Word Processing for Non-Majors	2	\$20
2540:150	Beginning Keyboarding	3	\$20
2540:151	Intermediate Keyboarding	3	\$20
2540:171	Shorthand Principles	4	\$5
2540:172	Shorthand Refresher and Transcription	4	\$10
2540:173	Shorthand and Transcription	4	\$10
2540:241	Information Management	3	\$20
2540:247	Automated Office Systems	4	\$15
2540:248	Advanced Office Technologies	3	\$15
2540:253	Advanced Keyboarding/Word Processing	3	\$20
2540:254	Legal Keyboarding	2	\$10
2540:255	Legal Office Procedure I	3	\$20
2540:256	Medical Keyboarding/Word Processing	3	\$20
2540:270	Office Software Applications	4	\$20
2540:271	Desktop Publishing	3	\$20
2540:273	Computer Basic Graphic Presentations	3	\$25
2540:274	Advanced Dictation and Transcription	4	\$10
2540:276	Executive Dictation & Transcription	4	\$10
2540:277	Legal Dictation and Transcription	4	\$10
2540:279	Legal Office Procedures II	4	\$20
2540:280	Word Processing Concepts	2-3	\$5
2540:281	Machine Transcription	2-3	\$20
2540:282	Medical Machine Transcriptions	3	\$20
2540:286	Microsoft Word-Windows	3	\$20
2540:287	Word Processing Application	3	\$10
2540:288	Word Processing on Computers	2	\$10
2540:290	Special Topics: Office Administration	5-3	\$10
2540:299	Workshop: Office Administration	1-5	\$10

Course Number	Course Title	Credits	Course Fee
2560:222	Microcomputer Applications in Transportation	3	\$5
2560:231	Computer Reservations I	2	\$25
2560:232	Computer Reservations II	2	\$25
2560:290	ST: Travel Agency Procedures	1-3	\$10
2600:125	Digital Electronics for Technicians	4	\$5
2600:230	Microprocedure and Digital Technology	4	\$5
2600:275	Digital Data Communication	4	\$5
2730:225	Histotechnology Practicum	5	\$15
2740:135	Medical Assisting Techniques I	4	\$28
2740:235	Medical Assisting Techniques II	4	\$43
2740:240	Medical Machine Transcription	3	\$28
2770:121	Surgical Assisting Procedures I	2	\$40
2770:131	Clinical Application I	2	\$15
2770:151	Clinical Experience I	2	\$61.50
2770:246	Medical Lab Procedures	1	\$25
2770:254	Clinical Experience IV	3	\$61.50
2790:121	Introduction to Respiratory Care	3	\$25
2790:122	Respiratory Patient Care	3	\$25
2790:123	Mechanical Ventilators	3	\$25
2790:131	Clinical Application I	3	\$15
2790:134	Clinical Application IV	5	\$15
2790:223	Advanced Respiratory Care	3	\$25
2800:200	Physics for Environmental Technology	3	\$25
2800:210	Technical Computations	1	\$25
2800:230	Water and Atmospheric Pollution	3	\$25
2800:232	Environmental Sampling Lab	2-3	\$25
2820:110	Physical Science for Technicians	3	\$10
2820:121	Technical Computations	1	\$5
2820:151	Basic Physics: Mechanics	3	\$5
2820:152	Basic Physics: Electricity and Magnetism	2	\$5
2820:153	Basic Physics: Heat, Light, and Sound	2	\$10
2820:161	Technical Physics: Mechanics I	2	\$5
2820:162	Technical Physics: Mechanics II	2	\$5
2820:163	Technical Physics: Electricity and Magnetism	2	\$10
2820:310	FORTRAN for Technologists	2	\$10
2830:110	Electromechanical Devices	4	\$5
2830:130	Introduction to Hydraulics and Pneumatics	3	\$5
2830:210	Motion Control I	4	\$5
2830:220	Motion Control II	3	\$5
2830:230	Machine and Process Control	4	\$5
2830:240	Industrial Computer Control	3	\$5
2830:250	Programmable Controllers	3	\$10
2830:260	Electrical Power and Wiring	3	\$5
2830:270	Troubleshooting and Repair	3	\$10
2840:100	Basic Chemistry	3	\$15
2840:101	Introductory Chemistry	3	\$15
2840:102	Introductory and Analytical Chemistry	3	\$15
2840:202	Instrumental Methods	3	\$5
2840:260	Compounding Methods	2	\$5
2840:270	Natural and Synthetic Organic Polymers	4	\$15
2860:120	DC Circuits	4	\$10
2860:122	AC Circuits	3	\$10
2860:123	Electronic Devices	3	\$10
2860:225	Electronic Device Applications	4	\$10
2860:227	Measurements	2	\$10
2860:231	Control Principles	3	\$10
2860:237	Digital Circuits	4	\$10
2860:238	Microprocessor Fundamentals	4	\$10
2860:242	Machinery and Controls	4	\$10
2860:251	Communications Circuits	3	\$10
2860:255	Electronic Design and Construction	2	\$20
2860:270	Survey of Electronics I	3	\$10
2860:271	Survey of Electronics II	3	\$10
2860:352	Microprocessor Systems	4	\$10
2860:353	Control Systems	4	\$10
2860:400	Computer Simulations in Technology	3	\$10
2860:453	Control Systems	4	\$10
2870:311	Computer Aided Drafting II	2	\$10
2870:410	Computer Aided Drafting III	2	\$15
2880:201	Robotics and Automated Manufacturing	3	\$10
2880:221	Surveying of Machine Tools & CNC	3	\$15
2880:222	CNC Manufacturing	3	\$15
2880:241	Introduction to Quality Assurance	3	\$5
2900:121	Fundamentals of Instrumentation	4	\$10
2900:232	Process Control	3	\$10
2900:239	Pulse Circuit Testing	3	\$10
2920:142	Introduction to Materials Technology	3	\$10
2920:245	Mechanical Design II	5	\$10
2920:247	Technology of Machine Tools	3	\$15
2920:252	Thermo. Fluids Lab	1	\$5
2920:339	Advanced Technology of Machine Tools	2	\$10
2920:346	Mechanical Design III	4	\$10
2920:348	Computer Numerical Control Programming I	3	\$5
2920:405	Introduction to Industrial Machine Control	3	\$5

**Note:** Additional workshops and special topics courses offered on a rotation basis may include fees not listed here. Consult appropriate department for course material and computing fees for those classes.

Course Number	Course Title	Credits	Course Fee
2920:448	Computer Numerical Control Programming II	3	\$10
2920:470	Plastics Processing and Testing	2	\$10
2940:121	Technical Drawing I	3	\$5
2940:122	Technical Drawing II	3	\$10
2940:170	Surveying Drafting	3	\$10
2940:180	Introduction to Computer Aided Drafting	1	\$10
2940:210	Computer Drafting	3	\$20
2940:250	Architectural Drafting	3	\$10
2980:122	Basic Surveying	3	\$5
2980:123	Surveying Field Practice	2	\$5
2980:222	Construction Surveying	3	\$5
2980:225	Advanced Surveying	4	\$5
2980:226	Subdivision Design	2	\$5
2980:237	Materials Testing I	2	\$5
2980:238	Materials Testing II	2	\$5
2980:245	Cost Analysis and Estimating	3	\$5
2980:250	Structural Drafting	2	\$5

**Buchtel College of Arts and Sciences**

3010:201	Society and the Environment	2	\$5
3010:401	Seminar: Environmental Studies	2	\$5
3100:100	Nature Study Plants	3	\$5
3100:101	Nature Study Animals	3	\$5
3100:104	Introduction to Ecology Laboratory	1	\$5
3100:111	Principles of Biology	4	\$20
3100:112	Principles of Biology	4	\$20
3100:130	Principles of Microbiology	3	\$25
3100:208	Human Anatomy and Physiology	4	\$15
3100:209	Human Anatomy and Physiology	4	\$15
3100:212	Genetics Laboratory	1	\$15
3100:264	Anatomy and Physiology of Speech and Hearing	3	\$15
3100:265	Introductory Human Physiology	4	\$15
3100:331	Microbiology	4	\$50
3100:342	Flora and Taxonomy	3	\$10
3100:365	Histology I	3	\$15
3100:366	Histology II	3	\$20
3100:384	Techniques and Instrumentation Laboratory	1	\$15
3100:400	Food Plants	2	\$10
3100:421	Tropical Field Biology	4	\$175
3100:422	Conservation of Biological Resources	4	\$5
3100:424	Freshwater Ecology	3	\$15
3100:426	Applied Aquatic Ecology	4	\$15
3100:433	Pathogenic Bacteriology	4	\$50
3100:435	Virology	4	\$50
3100:437	Immunology	4	\$50
3100:440	Mycology	4	\$15
3100:441	Plant Development	4	\$15
3100:442	Plant Anatomy	3	\$15
3100:443	Phycology	4	\$15
3100:445	Plant Morphology	4	\$15
3100:447	Plant Physiology	3	\$15
3100:448	Economic Botany	2	\$5
3100:451	General Entomology	4	\$10
3100:453	Invertebrate Zoology	4	\$25
3100:454	Parasitology	4	\$15
3100:456	Ornithology	4	\$15
3100:458	Vertebrate Zoology	4	\$10
3100:461	Human Physiology	4	\$25
3100:462	Human Physiology	4	\$25
3100:464	General and Comparative Physiology	4	\$50
3100:466	Vertebrate Embryology	4	\$30
3100:467	Comp. Vertebrate Morphology	4	\$25
3100:480	Radiation Biology	3	\$15
3100:494	Workshop: Basic Cell Tech and Res	1-3	\$10
3100:494	Workshop: Molecular Biology High School Teaching	1-3	\$15
3100:494	Workshop: Radiation Safety Instr and Comp	1-3	\$10
3100:494	Workshop: Tropical Biology-Jamaica	1-3	\$175
3100:495	ST: Principles of LT Microscopy	1-3	\$40
3150:129	Introduction to General, Organic and Biochemistry	4	\$20
3150:130	Introduction to General, Organic and Biochemistry	4	\$20
3150:151	Principles of Chemistry I	3	\$20
3150:152	Principles of Chemistry I/Lab	1	\$10
3150:153	Principles of Chemistry II	3	\$5
3150:154	Qualitative Analysis	2	\$15
3150:201	Organic Chemistry and Biochemistry I	4	\$25
3150:202	Organic Chemistry and Biochemistry II	4	\$25
3150:265	Organic Chemistry Laboratory I	2	\$25
3150:266	Organic Chemistry Laboratory II	2	\$25
3150:380	Advanced Chemistry Lab I	2	\$25
3150:381	Advanced Chemistry Lab II	2	\$25
3150:405	Biochemistry Laboratory	2	\$25
3150:480	Analytical Chemistry Laboratory III	2	\$30
3150:481	Advanced Chemistry Lab IV	2	\$30
3250:426	Econometric Methods and Applications	3	\$10
3250:427	Economics Forecasting	3	\$10
3300:111	English Composition I-C	4	\$15
3300:112	English Composition II-C	3	\$15
3300:278	Introduction to Fiction Writing	3	\$15



Course Number	Course Title	Credits	Course Fee
4400:470	Microprocessor Interfacing	3	\$50
4400:472	Control Systems II	4	\$50
4400:484	Power Electronics Laboratory and Design Project	2	\$50
4600:165	Tools for Mechanical Engineering Graphics	3	\$50
4600:401	Design of ENergy Systems	2	\$50
4600:420	Introduction to Finite Element Method	3	\$50
4600:461	Design of Mechanical Systems	2	\$50
4600:463	CAD/CAM	3	\$50
4600:483	Mechanical Engineering Measurements Laboratory	2	\$50
4600:484	Mechanical ENgineering Laboratory	2	\$50

**College of Education**

5050:210	Characteristics of Learners	3	\$10
5050:211	Teaching Learning Strategies	3	\$10
5050:310	Instructional Design	3	\$10
5050:311	Instructional Resources	3	\$10
5050:320	Diversity in Learners	3	\$10
5050:330	Classroom Management	3	\$10
5050:410	Professional Issues in Educations	3	\$10
5100:412	Design & Production of Instructional Materials	3	\$25
5100:420	Introduction to Computer-Based Education	3	\$25
5100:480	ST: Educational Media Technology	1-4	\$25
5100:490	Workshop: Motivation for Educators	1-3	\$15
5100:490	Workshop: Photography for Educators	1-3	\$25
5100:490	Workshop: Video Production for Educators	1-3	\$25
5200:220	Visual Arts Culture in Elementary Education	1	\$5
5200:320	Visual Arts Applications Elem. School	3	\$10
5200:321	Art for the Grades	2	\$5
5200:325	Elementary Field Experience II	2	\$10
5200:337	Teaching of Reading	3	\$10
5200:339	Principles of Diagnostic Teaching of Reading	3	\$10
5200:345	Teaching Language Literacy	4	\$10
5200:365	Comp. Musicianship for the Elem. Classroom Teacher	3	\$35
5200:370	Nursery Center Lab	2	\$10
5200:425	Elementary Field Experience III	2	\$10
5200:445	Evaluating Language Literacy	3	\$10
5200:490	Workshop: Actual Problem Solving & Hand Cal.	1-3	\$5
5200:490	Workshop: Dev. Appr. Pract/Ear Child	1-3	\$15
5200:490	Workshop: Establishing a Balanced Reading Program	1-3	\$10
5200:490	Workshop: Evaluating Language-Based Instruction	1-3	\$10
5200:490	Workshop: Literature in the Classroom	1-3	\$10
5200:490	Workshop: Making Language Learning Come Alive	1-3	\$10
5200:490	Workshop: Surviving Substitute Teaching K-8	1-3	\$10
5200:490	Workshop: Teaching Beyond Text	1-3	\$5
5200:490	Workshop: Child Abuse	2	\$5
5200:495	Student Teaching	4-8	\$25
5200:496	Student Teaching	1-6	\$25
5300:375	Exploratory Experience in Secondary Education	1	\$10
5300:425	Advanced Micro App. in Secondary Schools	3	\$20
5300:445	Microcomputer Literacy for Secondary Teachers	2	\$20
5300:490	Workshop: Adv. Instructional Techniques for Language	1-3	\$20
5300:490	Workshop: Educational Strategies Urban Schl. Environ.	1-3	\$5
5300:490	Workshop: French Language Immersion	1-3	\$7
5300:490	Workshop: Improving 9th Grade Math Prof. Scores	1-3	\$5
5300:490	Workshop: Teaching Film/TV Survival Skills	1-3	\$50
5300:490	Workshop: Tech. & Instr. In Foreign Languages	1-3	\$15
5300:490	Workshop: Whole Language Teaching Teachers	1-3	\$25
5300:495	Student Teaching	4-11	\$50
5540:123	Bowling	.5	\$15
5540:124	Canoeing	.5	\$10
5540:127	Golf	1	\$20
5540:133	Lifeguard Training	1	\$15
5540:137	Sailing	.5	\$10
5540:155	Basic Kayaking	1	\$10
5550:102	PE Act. I: Fitness/Cont. Act.	2	\$15
5550:193	Methods of Teaching Physical Educations	3	\$15
5550:202	Diagnosis of Motor Skills	2	\$15
5550:211	First Aid and CPR	2	\$15
5550:235	Concepts of Motor Development	3	\$10
5550:240	Care and Prevention of Athletic Injury	3	\$20
5550:245	Adapted Physical Education	3	\$10
5550:302	Physiology of Exercise	3	\$10
5550:335	Movement Experience for the Elementary Child	3	\$5
5550:336	Motor Learning and Development Early Child	2	\$5
5550:340	Care and Prevention: Athletic Injury	3	\$20
5550:490	Workshop: World Health Issues	1-3	\$5
5550:490	Workshop: Child at Risk	1-3	\$10
5550:490	Workshop: Child in Sport I	1-3	\$10
5550:490	Workshop: Child in Sport II	1-3	\$10
5550:490	Workshop: Child in Sport: Psych CNOS	1-3	\$6
5550:490	Workshop: Cl. Health/Wellness	1-3	\$5
5550:490	Workshop: Classroom Learning/Mgt. I	1-3	\$6
5550:490	Workshop: Concepts Strength Training	1-3	\$5
5550:490	Workshop: Coaching Effect	1-3	\$10

**Note:** Additional workshops and special topics courses offered on a rotation basis may include fees not listed here. Consult appropriate department for course material and computing fees for those classes.

Course Number	Course Title	Credits	Course Fee
5550:490	Workshop: Co-op/Creative Thinking	1-3	\$10
5550:490	Workshop: Current Concepts in Strenght Training	1-3	\$5
5550:490	Workshop: Dev. Successful Child I	1-3	\$6
5550:490	Workshop: Easing Stress: CH/TCH I	1-3	\$6
5550:490	Workshop: Education for Healthy Heart	1-3	\$6
5550:490	Workshop: Education Healthy Heart	1-3	\$6
5550:490	Workshop: Encourage At-Risk Child	1-3	\$6
5550:490	Workshop: Enhance Teacher Perf./Esteem	1-3	\$6
5550:490	Workshop: Enhancing Athletic Performance	1-3	\$6
5550:490	Workshop: Health Ed. Update	1-3	\$7
5550:490	Workshop: HIV/AIDS Update	1-3	\$5
5550:490	Workshop: Law/Van: Violence and the Unruly	1-3	\$6
5550:490	Workshop: Leg. Pit. Teacher/Coach Avoi	1-3	\$6
5550:490	Workshop: Leg. Rights of Profession	1-3	\$6
5550:490	Workshop: Max Ind Spt/Mot Performance	1-3	\$6
5550:490	Workshop: Menalt Strategies for Peak Performance	1-3	\$6
5550:490	Workshop: Methods of Teaching Health Ed. Update	1-3	\$
5550:490	Workshop: Motivational Strategies: Sports/Exercise	1-3	\$7
5550:490	Workshop: Motivating the At-Risk Child	1-3	\$6
5550:490	Workshop: Motivation, Lang. and Arts	1-3	\$6
5550:490	Workshop: New Games, Init, Co-op Games	1-3	\$6
5550:490	Workshop: Personal Watercraft	1-3	\$5
5550:490	Workshop: Psych Aspects of Coaching	1-3	\$8
5550:490	Workshop: Rehab. and Adv. Taping Techniques	1-3	\$6
5550:490	Workshop: Sport Perf. Enhance I	1-3	\$12
5550:490	Workshop: Sport Perf. Enhance II	1-3	\$10
5550:490	Workshop: Strategies for Classroom Mgt.	1-3	\$10
5550:490	Workshop: Stress in Child's World	1-3	\$6
5550:490	Workshop: Teaching 3 R's Movt.	1-3	\$6
5550:490	Workshop: Teacher's Role/Disruptive Student	1-3	\$10
5550:490	Workshop: Teachers Should Know About Law	1-3	\$6
5550:490	Workshop: Techniques for Develop Peace School	1-3	\$6
5550:490	Workshop: Tow Mor. Success Child	1-3	\$6
5550:490	Workshop: Water Safety Skills: Sailing	1-3	\$10
5550:490	Workshop: Water Safety Skills: Canoe	1-3	\$10
5550:495	Student Teaching for Physical and Health Education	10	\$50
5560:490	Workshop: Co-op Learning Resident OE	1-3	\$12
5560:490	Workshop: Inst: Self/Conc Enhance	1-3	\$12
5560:490	Workshop: OE the Sea Coast Environ.	1-3	\$7
5570:101	Personal Health	2	\$3
5570:202	Stress, Life-Style, and Health	3	\$10
5570:323	Methods and Materials Teaching Health Ed.	3	\$10
5610:461	Technology and Materials Application in Special Ed.	3	\$15
5610:465	Neuromotor Aspects of Physical Disabilities	3	\$10
5610:470	Clinical Practicum in Special Education	3	\$15
5610:480	Student Teaching: Developmentally Handicapped	12	\$50
5610:481	Student Teaching: Special Learning Disabled	12	\$50
5610:482	Student Teaching: Orthopedically Handicapped	12	\$50
5610:483	Student Teaching: Severe Behavior Handicapped	12	\$50
5610:484	Student Teaching: Multihandicapped	12	\$50
5610:485	Student Teaching: Special Education	8	\$50
5610:490	Workshop: Assess and Eval: EC SE	1-3	\$25

**College of Business Administration**

All courses at the undergraduate level in the College of Business Administration are assessed a fee of \$2 for one-credit classes, \$3.50 for two-credit classes, or \$5 for three- or four-credit classes.

**College of Fine and Applied Arts**

7100:120	Fundamentals of Sculpture	3	\$25
7100:121	Three-Dimensional Design	3	\$25
7100:130	Fundamentals of Screen Printing	3	\$25
7100:132	Instrument Drawing	3	\$5
7100:150	Fundamentals of Ceramics	3	\$25
7100:160	Fundamentals of Jewelry	3	\$25
7100:170	Fundamentals of Photography	3	\$25
7100:184	Introduction to Graphic Design	3	\$5
7100:185	Computer Graphics for Art I	3	\$25
7100:190	Fundamentals of Off-Loom Weaving	3	\$25
7100:213	Introduction to Lithography	3	\$35
7100:214	Introduction to Screen Printing	3	\$25
7100:215	Introduction to Relief Printing	3	\$35
7100:216	Introduction to Intaglio Printing	3	\$35
7100:221	Design Applications	3	\$25
7100:222	Introduction to Sculpture	3	\$40
7100:254	Introduction to Ceramics	3	\$30
7100:266	Introduction to Metalsmithing	3	\$30
7100:268	Color in Metal	3	\$30
7100:275	Introduction to Photography	3	\$35
7100:285	Computer Graphics for Art II	3	\$25
7100:286	Graphic Design II	3	\$5
7100:288	Letterform & Typography	3	\$25
7100:293	Introduction to Fiber Arts	3	\$35
7100:317	Printmaking II	3	\$35
7100:321	Figurative Sculpture	3	\$40
7100:322	Sculpture II	3	\$40
7100:323	Lost Wax Casting	3	\$50

Course Number	Course Title	Credits	Course Fee	Course Number	Course Title	Credits	Course Fee
7100:354	Ceramics II	3	\$35	7400:490	Workshop: Children and Stress	1-3	\$5
7100:366	Metalsmithing II	3	\$40	7400:490	Workshop: Children and Television	1-3	\$2
7100:368	Colors in Metals II	3	\$30	7400:490	Workshop: Dynamics of Self Esteem	1-3	\$4
7100:375	Photography II	3	\$35	7400:490	Workshop: Families: An Intl. Perspective	1-3	\$2,50
7100:376	Photographics	3	\$35	7400:490	Workshop: Family Stress/Coping	1-3	\$25
7100:380	Graphic Video	3	\$25	7400:490	Workshop: Functional/Dysfunctional Families	1-3	\$4
7100:385	Computer Graphics for Art III	3	\$30	7400:490	Workshop: Helping Families Cope with Stress	1-3	\$5
7100:386	Packaging Design	3	\$35	7400:490	Workshop: Helping Families Cope	1-3	\$5
7100:387	Advertising Layout Design	3	\$10	7400:490	Workshop: Helping Adolescent Sex Offenders	1-3	\$4
7100:388	Advertising Production and Design	3	\$35	7400:490	Workshop: Home Computer Productivity	1-3	\$10
7100:418	Advanced Printmaking	3	\$35	7400:490	Workshop: Home Word Processing	1-3	\$10
7100:422	Advanced Sculpture	3	\$40	7400:490	Workshop: Joy of Health Food Preparation	1-3	\$35
7100:454	Advanced Ceramics	3	\$45	7400:490	Workshop: Marriage and Divorce	1-3	\$4
7100:466	Advanced Metalsmithing	3	\$25	7400:490	Workshop: Nurturing Children	1-3	\$5
7100:475	Advanced Photography	3	\$35	7400:490	Workshop: Nutrition for Consumers	1-3	\$5
7100:482	Corporate Identity and Graphic Systems	3	\$35	7400:490	Workshop: Nutrition Update	1-3	\$5
7100:483	Graphic Design Presentation	3	\$35	7400:490	Workshop: Parent/Adolescent Communication	1-3	\$4
7100:488	Publication Design	3	\$35	7400:490	Workshop: Positive DiscussF Parents	1-3	\$5
7100:489	Special Topic: Studio Art	3	\$20	7400:490	Workshop: Relationship Building	1-3	\$4
7100:490	Workshop: Advanced Type and Image	1-4	\$20	7400:490	Workshop: Stress Management	1-3	\$4
7100:490	Workshop: Resources in Art Education	1-4	\$2	7400:490	Workshop: Success Parent & Group Parent	1-3	\$6
7100:491	Architectural Presentations I	3	\$5	7400:490	Workshop: Success Parenting-90s	1-3	\$6
7100:492	Architectural Presentations II	3	\$5	7400:490	Workshop: Teaching Nutrition and Wellness	1-3	\$2
7400:121	Textiles	3	\$6	7400:490	Workshop: Teenagers as Parents	1-3	\$5
7400:123	Fundamentals of Construction	3	\$12	7400:490	Workshop: WordPerfect Application for Families	1-3	\$25
7400:133	Nutrition Fundamentals	3	\$5	7400:490	Workshop: Child Abuse	2	\$5
7400:141	Food for the Family	3	\$25	7400:497	Internship: Fashion Retailing	2-6	18
7400:147	Orient. Prof. Studies in Home Ec. and Family Ecology	1	\$5	7400:497	Internship: Interior Design	2-6	18
7400:158	Introduction to Interior Design and Furnishings	3	\$15	7500:100	Fundamentals of Music	2	\$20
7400:219	Clothing Communication	3	\$5	7500:101	Introduction to Music Theory	2	\$20
7400:221	Evaluation of Apparel and Household Textiles	3	\$7	7500:104	Classic Piano I	2	\$15
7400:239	The Fashion Industry	3	\$7	7500:105	Classic Piano II	2	\$15
7400:258	Light in Men-Made Environments	3	\$15	7500:141	Ear Training/Sight Reading I	1	\$15
7400:259	Family Housing	3	\$7	7500:142	Ear Training/Sight Reading II	1	\$15
7400:265	Child Development	3	\$5	7500:154	Music Literature I	2	\$10
7400:306	Advanced Construction and Tailoring	5	\$7	7500:155	Music Literature II	2	\$10
7400:311	Contemporary Needle Arts	3	\$5	7500:254	String Instruments Techniques I	2	\$20
7400:315	Food Systems Management I - Clinical	2	\$50	7500:255	String Instruments Techniques II	2	\$20
7400:316	Science of Nutrition	4	\$5	7500:261	Keyboard Harmony I	2	\$15
7400:329	Nutrition in Medical Science I - Clinical	2	\$50	7500:262	Keyboard Harmony II	2	\$15
7400:332	Human Factors/Interior Space	3	\$15	7500:275	Double Reed/Percussion Methods	1	\$15
7400:333	Space Planning and Programming	3	\$15	7500:276	Brass Methods	1	\$15
7400:334	Specifications for Interiors I	3	\$15	7500:277	Woodwind Methods	1	\$15
7400:335	Specifications for Interiors II	3	\$15	7500:342	Elementary Instrumental Music	2	\$20
7400:336	Principle and Practice: Interior Design	3	\$10	7500:343	Secondary Instrumental Music	2	\$20
7400:340	Meal Service	2	\$30	7500:351	Music History I	3	\$10
7400:362	Family Life Management	3	\$5	7500:352	Music History II	3	\$10
7400:390	Family Relationships in Middle and Later Years	3	\$5	7500:353	Electronic Music	3	\$25
7400:403	Advanced Food Preparation	3	\$15	7500:453	Music Software Survey and use	2	\$25
7400:414	Food Systems Management II - Clinical	3	\$120	7500:490	Workshop: Kodaly IB	1-3	\$10
7400:418	History of Furniture and Interiors I	3	\$7	7500:490	Workshop: Adv. MIDI Applications	1-3	\$40
7400:419	History of Furniture and Interiors II	3	\$7	7500:490	Workshop: Alexander Technique	1-3	\$50
7400:420	Experimental Foods	3	\$15	7500:490	Workshop: Appalachian Clog and Dance	1-3	\$11
7400:423	Professional Image Analysis	3	\$10	7500:490	Workshop: Art of Steel Drum Making	1-3	\$12
7400:425	Advanced Textiles	3	\$12	7500:490	Workshop: Brass Teach Yechniques for Pu	1-3	\$8
7400:426	Therapeutic Nutrition	4	\$10	7500:490	Workshop: Class Guitar Career Fest	1-3	\$30
7400:429	Nutrition in Medical Science II - Clinical	3	\$120	7500:490	Workshop: Comp Drl Dsgn Impr Perc	1-3	\$15
7400:432	Interiors, Textiles, and Product Analysis	3	\$5	7500:490	Workshop: Comp MIDI for Musician	1-3	\$40
7400:433	Residential Design	3	\$15	7500:490	Workshop: Comp MIDI Synth for Ed	1-3	\$40
7400:434	Commercial Design	3	\$15	7500:490	Workshop: Comp Skills/Vocal Tchrs	1-3	\$15
7400:435	Principles and Practices of Interior Design	3	\$10	7500:490	Workshop: Computerized Drill Design	1-3	\$15
7400:436	Textile Conservation	3	\$5	7500:490	Workshop: Cond Gest: Inf Chor Tone	1-3	\$25
7400:437	Historic Costume to 1800	3	\$5	7500:490	Workshop: Enhanced Con Amer Lit/Music	1-3	\$15
7400:438	History of Fashion Since 1780	3	\$5	7500:490	Workshop: Excellence in Perf I	1-3	\$150
7400:447	Senior Seminar: Critical Issues in Prof. Development	1	\$10	7500:490	Workshop: Excellence in Perf II	1-3	\$190
7400:449	Flat Pattern Design	3	\$5	7500:490	Workshop: Healthful Classroom Spe	1-3	\$5
7400:450	Demonstration Techniques	2	\$5	7500:490	Workshop: Kodaly IA	1-3	\$10
7400:458	Office Design	3	\$15	7500:490	Workshop: March Band Techniques	1-3	\$15
7400:459	Senior Design Synthesis	3	\$15	7500:490	Workshop: March Band Workshop	1-3	\$25
7400:481	Community Nutrition I	1	\$30	7500:490	Workshop: Multi Story Telling	1-3	\$10
7400:483	Community Nutrition II	1	\$30	7500:490	Workshop: Mus Typst Finale/Encore	1-3	\$40
7400:485	Seminar: Dec. Elementary Interior Design	1-3	\$10	7500:490	Workshop: Sum Brass Perf for HS	1-3	\$6
7400:485	Seminar: Human Factors and Interior Space	1-3	\$15	7500:490	Workshop: Woodwinds Frnd Tps Sch Dir.	1-3	\$20
7400:485	Seminar: Interior Design Theories	1-3	\$10	7520:021-069	Applied Music for Non-Majors	2	\$95
7400:485	Seminar: NCIDQ Prep	1-3	\$10	7520:021-069	Applied Music for Non-Majors	4	\$190
7400:485	Seminar: Office Design	1-3	\$15	7520:121-489	Applied Music for Music Majors	2	\$95
7400:485	Seminar: Senior Design Synthesis	1-3	\$15	7520:121-489	Applied Music for Music Majors	4	\$190
7400:485	Seminar: Spec. for Interior Design	1-3	\$10	7800:201	News Writing	3	\$10
7400:488	Practicum in Dietetics	1-3	\$25	7800:204	Editing	3	\$5
7400:490	Workshop: Child in Marketplace	1-3	\$5	7800:206	Feature Writing	3	\$5
7400:490	Workshop: Children and Loss	1-3	\$5	7800:280	Media Production Techniques	3	\$15
7400:490	Workshop: Images for Success	1-3	\$10	7800:282	Radio Production	3	\$10
7400:490	Workshop: American Cooking	1-3	\$35	7800:283	Television Production	3	\$15
7400:490	Workshop: Building Adolescent Life Skills	1-3	\$5	7800:288	Film Production	3	\$15
				7800:301	Advanced Newswriting	3	\$5
				7800:303	Public Relations Writing	3	\$10
				7800:304	Editing	3	\$5
				7800:307	Commercial Electronic Publishing	3	\$10

Note: Additional workshops and special topics courses offered on a rotation basis may include fees not listed here. Consult appropriate department for course material and computing fees for those classes.

Course Number	Course Title	Credits	Course Fee
7600:309	Promotional Publications	3	\$10
7600:361	Audio Recording Techniques	3	\$10
7600:362	Video Camera and Recording	3	\$15
7600:383	Advanced Television Production	3	\$15
7600:405	Media Copywriting	3	\$10
7600:436	Organizational Communication II	3	\$5
7600:463	Corporate Video Design	3	\$10
7600:464	Corporate Video Management	3	\$10
7600:466	Audio and Video Editing	3	\$15
7600:467	Directing Video Productions	3	\$15
7600:492	Corporate Video Practicum	2-6	\$15
7700:350	Clinical Practicum: Articulation/Phonology	1	\$10
7700:351	Clinical Practicum: Language	1	\$10
7700:352	Clinical Practicum: Aural Rehab	1	\$10
7700:450	Assessment of Communicative Disorders	3	\$15
7700:451	Clinical Practicum: Diagnostic Audiology	1	\$10
7800:106	Intro to Scenic Design	3	\$5
7800:263	Scene Painting	3	\$5
7800:265	Basic Stagecraft I	3	\$10
7800:266	Basic Stagecraft II	3	\$10
7800:365	Stage Design	3	\$5
7800:470	Practicum in Production Design Techniques	1-3	\$5
7900:119	Modern I: Introduction to Modern Dance I	2	\$5
7900:120	Modern II: Introduction to Modern Dance II	2	\$5
7900:124	Introduction to Ballet I	2	\$5
7900:125	Introduction to Ballet II	2	\$5
7900:130	Introduction to Jazz Dance I	2	\$5
7900:144	Introduction to Tap Technique I	2	\$5
7900:219	Modern III: Intermediate Beginner A	2	\$5
7900:220	Modern IV: Intermediate Beginner B	2	\$5
7900:224	Ballet III: Intermediate Beginner A	3	\$5
7900:225	Ballet IV: Intermediate Beginner B	3	\$5
7900:230	Introduction to Jazz Dance II	2	\$5
7910:101	Classical Ballet Ensemble	1	\$5
7910:102	Character Ballet Ensemble	1	\$5
7910:103	Contemporary Dance Ensemble	1	\$5
7910:104	Jazz Dance Ensemble	1	\$5
7910:105	Musical Comedy Ensemble	1	\$5
7910:106	Opera Dance Ensemble	1	\$5
7910:107	Experimental Dance Ensemble	1	\$5
7910:108	Choreographer's Workshop	1	\$5
7910:109	Ethnic Dance Ensemble	1	\$5
7910:110	Period Dance Ensemble	1	\$5
7910:111	Touring Ensemble	1	\$5
7910:112	Dance Production Ensemble	1	\$5
7920:122	Ballet V: Intermediate Principles	5	\$5
7920:141	Pointe I	2	\$5
7920:145	Beginning Tap Styles	2	\$5
7920:222	Ballet VI: Advanced Intermediate Technique	5	\$5
7900:228	Modern V: Intermediate Modern Dance A	3	\$5
7920:229	Modern VI: Intermediate Modern Dance B	3	\$5
7920:241	Pointe II	2	\$5
7920:246	Intermediate Tap Styles	2	\$5
7920:316	Choreography I	2	\$5
7920:317	Choreography II	2	\$5
7920:320	Dance Notation	2	\$5
7920:322	Ballet VII: Principles of Advanced Technique	5	\$5
7920:328	Modern VII: Advanced Modern Dance A	3	\$5
7920:329	Modern VIII: Advanced Modern Dance B	3	\$5
7920:334	Pas De Deux I	2	\$5
7920:341	Pointe III	2	\$5
7920:342	Men's Class	2	\$5
7920:351	Jazz Dance Styles	2	\$5
7920:416	Choreography III	2	\$5
7920:417	Choreography IV	2	\$5
7920:422	Ballet VIII: Advanced Technique Performance	5	\$5
7920:434	Pas De Deux II	2	\$5
7920:451	Advanced Jazz Dance Styles	2	\$5
7920:490	Workshop in Dance	1-3	\$5
7920:497	Independent Study in Dance	1-3	\$5
7920:498	Senior Honors Project in Dance	1-3	\$5

**College of Nursing**

8200:210	Basic Concepts of Nursing	4	\$25
8200:220	Foundations of Nursing Practice	5	\$25
8200:225	Health Assessment	3	\$25
8200:350	Nursing of the Childbearing Family	5	\$25
8200:360	Nursing Care of Adults	5	\$25
8200:370	Nursing Care of Older Adults	5	\$25
8200:410	Nursing Families with Children	5	\$50
8200:430	Nursing in Complex/Critical Situations	3	\$50

**Note:** Additional workshops and special topics courses offered on a rotation basis may include fees not listed here. Consult appropriate department for course material and computing fees for those classes.

**Installment Payment Plan**

This plan is designed to spread registration and University housing fees into as many as four installments (two during a summer term) depending on when the application is received. An Application Service Charge of \$17 per contract for registration fees and \$17 per contract for University housing fees is assessed for the Installment Payment Plan (IPP). If a payment is not received on the due date, a late payment penalty is assessed at \$20 per payment for registration fees or \$40 per payment if University housing is included. These fees are subject to change.

For applications received up to and including the published semester fee deadline, a 30-percent down payment is required with three follow-up installments at 20 percent, 25 percent and 25 percent respectively. Applications received after the fee deadline and up to the first day of classes will require a 50-percent down payment with two follow-up installments of 25 percent each. For summer terms, the down payment is 30 percent plus one installment at 70 percent or less, depending on the amount of direct application. If the direct application of financial aid for the fall or spring semester is greater than 30 percent and is used as a down payment, the remaining balance will be billed in one, two or three equal payments, depending on when the student registers. Installments are billed monthly starting approximately 30 days after the start of classes.

Financial aid may be used to pay the down payment. If the amount of aid is greater than the required down payment, the entire aid amount must be used as the downpayment. The remaining installment balance will be billed either in two or three equal payments, depending on the registration period.

Application forms are included with the Student Fee Invoice or may be obtained in Spicer Hall 105 or by calling (216) 972-5100.

**Room and Board**

Residence hall facilities are available for the housing of a limited number of undergraduate students. The current total cost of housing accommodations and food service is \$2,031 per semester or \$4,062 per year. All students who live in the residence halls must participate in one of the provided board plan options.

A student living off campus may participate in the residence hall board program, the current rate being \$695 per semester.

**Veterans Expenses**

A disabled veteran who is eligible for admission to the University may register for courses without payment of fees if the disabled veteran has been authorized for training by the V.A. If the disabled veteran has not been authorized, payment of all fees is required. However, the University will return to the veteran the payment made when the official authorization is received.

A non-disabled veteran must pay fees at the time of registration. The non-disabled veteran will receive direct payment from the V.A. after enrollment has been certified under the provision of USC Title 38.

An Ohio Veterans Bonus Commission recipient may arrange with the Accounts Receivable Office to have the Ohio Bonus Commission billed directly for tuition charges only.

Dependents of a veteran covered under other provisions of USC Title 38 must pay fees at the time of registration. The V.A. will make direct payment to the payee.

**Auditors**

The fees for an auditor in any course or group of courses are the same as if taken for credit.

**Student Health and Accident Insurance**

Student health and accident insurance designed specifically for a student of The University of Akron is required of all residence hall students and all international students except those who present proof that they already have similar coverage. Other students carrying nine or more credits, or graduate students carrying six or more credits may purchase this insurance, at the same annual individual rate, through the Student Health Services Office.

## Regulations Regarding Refunds – Credit/Noncredit

All fees, e.g., instructional, general, parking, etc., are subject to change without notice. Students shall be charged fees and/or tuition and other fees in accordance with schedules adopted by the Board of Trustees. Registration does not automatically carry with it the right of a refund or reduction of indebtedness in cases of failure or inability to attend class or in cases of withdrawal. The student assumes the risk of all changes in business or personal affairs.

### Fees Subject to Refund – Credit

Certain fees are subject to refund.

- Instructional fee (tuition) and nonresident surcharge.
- General fee.
- Course materials and computing fee
- Student parking fee (only if permit is returned).
- Student teaching fee.
- Laboratory breakage and late service deposit.
- Residence hall fees (note: subject to special policy).

### Amount of Refund – Credit

Amount of refund is to be determined in accordance with the following regulations and subject to course instructor/adviser signature requirements contained in The University of Akron's official withdrawal policy:

- **In full**
  - if the University cancels the course;
  - if the University does not permit the student to enroll or continue in the course;
  - if the student dies before or during the term; is drafted into military service by the United States; is called to active duty; or if the student enlists in the National Guard or Reserve prior to the beginning of the term. Notice of induction or orders to active duty is required if the student is called to active duty. A student who enlists voluntarily for active duty should see "in part" below.
- **In part**
  - less \$5 per enrolled credit to a maximum of \$50 if the student requests official withdrawal from all credit courses on or before the Sunday (midnight) which begins the second week of the enrolled term. (Note: if a semester begins other than on a Monday, the maximum refund period will extend to seven (7) days from the beginning of the semester. Example: Semester begins on Tuesday, the maximum refund period will end at midnight on the following Monday.)
  - if the student requests official withdrawal after the Sunday (Midnight) which begins the second week of the fall or spring semesters, the following refund percentages apply:
 

During the second week of the semester	70%
During the third week of the semester	50%
During the fourth week of the semester	30%
During the fifth week of the semester	20%
Thereafter	0%
  - if the student requests official withdrawal after the Sunday (Midnight) which begins the second week of the semester of any Summer Session the following refund percentages apply:
 

During the second week of the summer session	40%
Thereafter	0%
- refunds for course sections which have not been scheduled consistent with either the standard 15-week fall/spring semester or the five-week summer term scheduling pattern will be handled on a pro rata basis according to the number of days of the section (class, institute, or workshop) which have passed compared to the number of days said section has been scheduled to meet.
- Refunds will be determined as of the date of formal withdrawal unless proof is submitted that circumstances beyond control of the student, e.g., hospital confinement, prevented the filing of the formal withdrawal earlier, in which case the refund will be determined as of said circumstance. The student assumes responsibility for filing for a refund.

- Refunds will be mailed as soon as possible. Refund checks are subject to deduction for any amount owed to The University of Akron by the student.
- No refund will be granted to a student who is dismissed or suspended for disciplinary reasons.

### Amount of Refund – Noncredit

- In full less \$10 when the student submits a written request to be withdrawn, received three working days before the start of class, or withdrawals in person through the Course Director.
- In part
 

Courses of 4 class meetings:	
After the first class meeting	50%
After the second class meeting	0%
Courses of 5 to 11 class meetings:	
After the first class meeting	60%
After the second class meeting	30%
After the third class meeting	0%
Courses of 12 class meetings or more:	
After the first class meeting	60%
After the second class meeting	45%
After the third class meeting	30%
After the fourth class meeting	0%
- Refunds will be determined by the date (postmark of written request) of formal withdrawal, unless proof is submitted that circumstances beyond the control of the student, e.g., hospital confinement, prevented filing of the formal withdrawal earlier. In this case, the refund will be determined as of the date of said circumstance. Refunds will be mailed as soon as possible.

### Refund for cancelled classes

The University reserves the right to cancel a course should there be insufficient enrollment. A full refund will be mailed to the student as soon as possible.

## Residence Hall Refunds

### Refund/Release and Forfeiture Policy

A contract for housing accommodations and food services at The University of Akron upon being breached by the student, or otherwise terminated by The University of Akron, is subject to the following refund provisions:

- A full refund of any prepaid fees (including the \$150 deposit) and release of other financial liability therefore under the following circumstances:
  - Graduation of the student from The University of Akron.
  - Academic dismissal of the student from The University of Akron.
  - Non-attendance or complete withdrawal by the student from The University of Akron prior to the start of the Contract Terms (except the advance rental payment of \$150, which shall be forfeited). The \$150 deposit will be refunded for new entering students when notification of intent to break Contract is received prior to May 15 for the following fall semester.
  - In the event mandatory or recommended participation in academic programs of The University of Akron requires the student to commute regularly beyond the Akron metropolitan area (i.e., student teaching or co-op assignments).
- With a partial refund of prepaid fees (except the advance \$150 rental payment) according to the Refund Schedule below, and release of financial liability for subsequent semesters covered by the Contract Term, in the event the student completely withdraws from The University of Akron after the start of the Contract Term. In such instances, the student shall not be liable for further forfeiture.
- With a partial refund of prepaid fees in accordance with the Refund Schedule below:
  - In the event the University, in its sole discretion, terminates the Contract for reasons related to the orderly operation of the Residence Halls, or for reasons relating to the health, physical, or emotional safety and well-being of the student, or for reasons relating to the health and well-being of the persons or property of other students, faculty, staff, or University property. In such instances the student shall not be liable for further forfeitures and shall be released of further financial liability beyond the date of termination.
  - In the event the student breaches the Contract for any reason, except that

as set forth in C-3 below, prior to the end of the terms thereof but continues to be enrolled as a student at The University of Akron. In addition, if the student has contracted for any subsequent semester beyond that semester in which the Contract is terminated, the student shall pay as forfeiture for breach of the term of the Contract an additional amount of \$200.

- In the event that the student is dismissed or suspended from The University of Akron for disciplinary reasons in accordance with laws or rules and regulations of the Board of Trustees; or, if the student is placed on terms of disciplinary probation in accordance with laws or rules and regulations of the Board of Trustees, whereby such terms of probation prohibit the student from residing in University housing accommodations.

These conditions do not release the student from financial liability for any fees which are due not later than the effective dates of such termination, dismissal, suspension, or probation.

### Refund Schedule

Beginning with the first day of the fall and spring semesters, the following refund percentages shall apply for all contracts for housing accommodations and food services:

Inclusive Dates	Refund Applicable
1-12 calendar days	70% refund of housing and 70% of unused declining balance plus 70% of traditional food plan, if applicable
13-24 calendar days	50% refund of housing and 50% of unused declining balance plus 50% of traditional food plan, if applicable
25-36 calendar days	30% refund of housing and 30% of unused declining balance plus 30% of traditional food plan, if applicable
Thereafter	0%

### Notice Requirements

All notices of intent to break this contract must be submitted in writing to the Office of Residence Halls. If the student is a minor (under the age of 18 years), the written notification of termination must be cosigned by the student's parent or legal guardian.



## THE UNIVERSITY OF AKRON RESIDENCY REQUIREMENTS

Payment of a non-resident tuition surcharge is required of any student who does not qualify as a permanent resident of Ohio as defined by one or more of the following sections:

3333-1-10 of the Ohio Revised Code

### A. Intent and Authority

1. It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.
2. This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by Section 3333.31 of the Revised Code.

### B. Definitions

For purposes of this rule:

1. A "resident of Ohio for all other legal purposes" shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.
2. "Financial support" as used in this rule, shall not include grants, scholarships, and awards from persons or entities which are not related to the recipient.
3. An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college or private medical or dental college which receives a direct subsidy from the state of Ohio.
4. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, "domicile" is a person's permanent place of abode; there must exist a demonstrated intent to live permanently in Ohio, and a legal ability under federal and state law to reside permanently in the state. For the purpose of this policy, only one (1) domicile may be maintained at a given time.
5. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, an individual's immigration status will not preclude an individual from obtaining resident status if that individual has the current legal status to remain permanently in the United States.

### C. Residency for subsidy and tuition surcharge purposes

The following persons shall be classified as residents of the state of Ohio for subsidy and tuition surcharge purposes:

1. A dependent student, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for 12 consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.
2. A person who has been a resident of Ohio for the purpose of this rule for at least 12 consecutive months immediately preceding his or her enrollment in an institution of higher education and who is not receiving, and has not directly or indirectly received in the preceding 12 consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.
3. A dependent child of a parent or legal guardian or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time self-sustaining employment and established domicile in the State of Ohio for reasons other than gaining the benefit of favorable tuition rates. Documentation of full-time employment and domicile shall include both of the following documents:
  - a. A sworn statement from the employer or the employer's representative on the letterhead of the employer or the employer's representative certifying that parent or spouse of the student is employed full-time in Ohio.
  - b. A copy of the lease under which the parent or the spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which parent or spouse is the owner and occupant; or if parent or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that parent or spouse resides at that residence.

**D. Additional criteria which may be considered in determining residency for the purpose may include but are not limited to the following:**

1. Criteria evidencing residency:
  - a. if a person is subject to tax liability under Section 5747.02 of the Revised Code;
  - b. If a person qualifies to vote in Ohio;
  - c. if a person is eligible to receive state welfare benefits;
  - d. if a person has an Ohio driver's license and/or motor vehicle registration.
2. Criteria evidencing lack of residency:
  - a. if a person is a resident of or intends to be a resident of another state or nation for the purposes of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the loan program is only available to residents of that state or nation);
  - b. if a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits.

**E. Exceptions to the general rule of residency for subsidy and tuition surcharge purposes.**

1. A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education.
2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
3. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.
4. A person who is transferred by his or her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.
5. A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

**F. Procedures**

1. A dependent person classified as a resident of Ohio for these purposes (under the provisions of Section C. 1 of this rule) and who is enrolled in an institution of higher education when his or her parents or legal guardian removes their residency from the State of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.
2. In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of 12 months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraphs C. 1. or C. 2. of this rule.
3. For students who qualify for residency status under C.3., residency status is lost immediately if the employed person upon whom resident student status was based accepts employment and establishes domicile outside Ohio less than 12 months after accepting employment and establishing domicile in Ohio.
4. Any person once classified as a nonresident, upon the completion of 12 consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding 12 consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident. Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.
5. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.
6. Any institution of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her Ohio residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.



# Financial Aid

Financial aid programs were developed by the federal and state governments as well as by institutions of postsecondary education to assist students from families with limited resources to meet educational expenses. The primary purpose of financial aid is to ensure that no one is denied the opportunity of a college education because of financial need.

When applying for financial aid at The University of Akron, the Office of Student Financial Aid determines a budget that best suits the needs of the student. The budget includes direct costs that must be paid to the University (instructional and general fees and room and board in the residence halls) and variable expenses such as transportation and personal expenses.

Generally, financial aid is provided in three forms: gift aid, loans, and work. It is not unusual for a student to have all three forms of aid. This is called a "financial aid package." If a person receives a proper financial aid package, it is assumed that the family will not be expected to contribute more than is reasonable for a family member's education. The word "family" is crucial because the financial aid system assumes that the family will work together to assist a family member meet college expenses.

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## SOURCES OF AID

To meet the needs of the financial aid applicant there are a number of sources from which aid can be received. The following programs represent those sources of aid for which The University of Akron selects recipients and/or distributes the funds. The application(s) for these programs can be obtained at the Office of Student Financial Aid, located in Spicer Hall, 119.

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### Federal Programs

#### Federal Pell Grant

The Pell Grant is the foundation of student financial aid. The grant is awarded to the student by the federal government. After applying for the grant, the student will receive a Student Aid Report (SAR), and the University will receive the information electronically as long as the student listed The University of Akron as a college choice on the application. The office then calculates the amount of the grant, which is based on financial need and enrollment status (full- or part-time). If The University of Akron is not listed as a college choice, contact the Office of Student Financial Aid for additional instructions.

#### Federal Supplemental Educational Opportunity Grant

The Federal Supplemental Educational Opportunity Grant (FSEOG) is a federal grant that is awarded by The University of Akron. The amount of the grant is determined by the school attended and is based on the need and the costs at that school. Entering freshmen and continuing students must have a 2.00 grade-point average and an early application to be eligible for the FSEOG.

#### Federal College Work-Study Program

The College Work-Study Program (FCWSP) is a program that provides an eligible student with a job on campus or, in limited cases, an off-campus job related to community service. Eligibility for FCWSP is determined on the basis of need. The office determines the amount of money that can be earned and places the student in a suitable job. The student and job supervisor adapt working hours to meet the student's class schedule. Students must have a 2.00 grade-point average and an early application to be eligible for federal work study.

#### Federal Perkins Loan

The Federal Perkins Loan Program offers low-interest, long-term loans for an eligible student. Eligibility and loan amounts are determined by the office on the basis of need. This federal loan must be repaid, beginning nine months after ceasing to be at least a half-time student. Interest at five percent is calculated at the time repayment of the loan begins. If the student is teaching in certain fields or locations after graduation, eligibility for cancellation of all or part of the amount that was borrowed is possible. Entering freshmen and continuing students must have a 2.00 grade-point average to be eligible for the Perkins Loan and an early application.

#### Federal Subsidized Stafford Loan

This program offers low-interest loans to an eligible student on the basis of financial need. After a Free Application for Federal Student Aid (FAFSA) has been received from the need analysis processor and processed by the University, an Award Proposal and a Loan Request Form will be sent to the student. The Award Proposal will estimate potential eligibility for the loan, and the Loan Request Form will start the application process. While the student is in school, the interest is paid by the federal government.

#### Federal Unsubsidized Stafford Loan

This loan is not based on financial need. The combination of loans under both Subsidized and Unsubsidized Stafford cannot exceed the maximum eligibility for the entire year. Interest will begin accumulating on the unsubsidized portion immediately. Steps for application are the same as the Federal Subsidized Stafford Loan.

#### Nursing Student Loan

A low-interest federal loan is available to an eligible student who is pursuing the Bachelor of Science in Nursing. It is based on need, and the amounts are determined by the Office of Student Financial Aid. Repayment begins nine months after ceasing to be a half-time student. Interest upon repayment is five percent.

#### Federal PLUS Loan

This loan is available to parents of dependent students. Unlike the other federal loan programs, eligibility is not based on financial need. Low monthly payments for this variable-interest rate loan begin 30-60 days after loan receipt unless alternative arrangements are made with the lender. Applications may be obtained at the University or by contacting your local lending institution.

#### ROTC Scholarships

Two- and three-year scholarships paying tuition, fees, flat rates for books each semester, and subsistence allowances of \$100 per month are available to full-time students. Contact the Army or Air Force offices for additional information.

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### State Programs

#### Ohio Instructional Grant (OIG)

The OIG is available to an eligible undergraduate student who is an Ohio resident. Eligibility is based on family income. The grant is awarded by the Ohio Student Aid Commission. If eligible, the school will receive an award notice to disburse funds to the student. The student must complete the FAFSA to apply for the grant.

#### Ohio Academic Scholarship

The state of Ohio awards scholarships each year to a graduating senior from each high school in Ohio. The scholarship must be used at a college in Ohio. The amount is \$1,000 and is renewable for four years.

#### Ohio National Guard Scholarship

This scholarship is available to the student who enlists in the Ohio National Guard. Contact a local recruiter for information.

#### Ohio War Orphans Scholarship

Scholarships are available to a student whose father or mother was a veteran from Ohio and has been disabled or deceased. For information contact the Ohio Student Aid Commission.

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### University Programs

#### Scholarships

The University offers scholarships to the student with high academic achievement. Academic scholarships are awarded to the continuing student as well as the outstanding high school student who plans to enroll. These academic scholarships are renewable each year based on continued high academic performance. A University Scholarship Application must be submitted, but a need analysis form is not required.

**Presidential Scholarships** are targeted to students in the top three percent of their high school graduating class and in the upper ten percent nationally in test scores. Approximately 60 scholarships are awarded each year to new freshmen.

The **Honors Program** targets scholarships to students with at least a 3.5 high school grade-point average and in the upper ten percent nationally in test scores. The scholarships are competitive, and interviews are required.

**National Merit Finalists** are awarded full scholarships for the freshmen year and full tuition scholarships for each year thereafter of undergraduate education.

**General Academic Scholarships** and **Minority Scholarships** are awarded to continuing and outstanding high school students who do not qualify for Presidential or Honors Program scholarships.

Two- and three-year **ROTC Scholarships** paying tuition, fees, flat rates for books each semester, and subsistence allowances of \$100 per month are available to full-time students. Contact the Army or Air Force offices for additional information.

#### Installment Payment Plan

The University offers an installment Payment Plan (IPP) to the student who needs temporary help in paying tuition and housing. This must be repaid in full before

the end of the term for which the money was borrowed. Information and applications are available at the IPP Office (Spicer Hall 105) (216) 972-5100.

Special long-term loans are available to selected students in certain fields who need partial help.

#### **Student Employment**

Check the "Student Job Board" near Simmons Hall 178 or Spicer Hall 119 for on- and off-campus part-time job listings. Register for the applicant pool in Spicer Hall, 119.

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## **Application for Financial Aid**

To apply for the Federal Pell Grant, Ohio Instructional Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Nursing Student Loan, Federal Stafford Loan (Subsidized and Unsubsidized), and the Federal College Work-Study Program, the student must complete and submit the Free Application for Federal Student (FAFSA) or the Renewal Application to the Federal Processor.

Applications are available in January for the following school year.

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## **Computation of Financial Aid**

Government formulas determine what the family may be able to contribute toward the student's education. This amount is called the family contribution. Some of the key factors involved in computing the family contribution are as follows:

- Family income.
- Family assets.
- Family size.
- Number of family members in college.
- Medical bills.
- Unusual expenses.

The difference between the cost of education and the family contribution is called the unmet need. The unmet need is the amount the Office of Student Financial Aid attempts to cover through various financial aid programs to assist a student in meeting educational costs.

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## **Notification of Award**

A student will be notified of the aid package by a Financial Aid Award Proposal sent to the mailing address. If questions arise regarding your Financial Aid Award Proposal, either call or write the office for clarification. The Award Proposal must be returned to the Office of Student Financial Aid only if the student is declining some or all of the aid offered.

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## **Distribution of Aid**

Most financial aid will be applied directly to the tuition fee invoice. Awards are based on full-time enrollment (12 semester credits). If the student is not taking at least 12 credits, contact the Office of Student Financial Aid so that financial aid may be adjusted.

The student is awarded aid for the entire academic year; however, the aid is disbursed proportionately each semester. A brochure giving specific instructions will be included with the student's award proposals. If the student's aid exceeds the direct costs, the difference is given to the student prior to the beginning of each semester to assist with other educational expenses such as transportation, housing, books, etc.

The student must maintain satisfactory enrollment status to be eligible for all aid.

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## **Revision of Awards**

After receipt of the financial aid award, situations may arise which may necessitate a revision in the aid package. A revision may result from receipt of an outside scholarship; a dramatic change in the family income such as unemployment of a parent or a divorce, etc. If family circumstances change, contact the Office of Financial Aid so the aid package may be reviewed.

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## **Eligibility for Aid as it Applies to Certain Classifications of Students**

### **Transfer Students**

A student transferring to The University of Akron at the beginning of fall semester must have the previous college complete a financial aid transcript and send it to the Office of Student Financial Aid.

If a student is transferring to the University during the academic year and has received a Federal Pell Grant and/or OIG the prior school, the student must:

- Request a duplicate Student Aid Report from Federal Pell Grant. This duplicate Student Aid Report must be sent to the Office of Student Financial Aid before any funds can be disbursed to the student. Instructions for receiving a duplicate Student Aid Report can be obtained from the office.
- Have the former Financial Aid Office provide a transfer of remaining funds request to have the OIG transferred to The University of Akron. Federal Perkins Loans, Federal College Work-Study Programs, Federal Supplemental Educational Opportunity Grants, and scholarships do not automatically transfer. The student must reapply for these programs at The University of Akron.

### **Graduate Students, Law Students, and Postbaccalaureate Students**

A graduate or professional student who has already received a bachelor's degree can apply for the Federal Subsidized and Unsubsidized Stafford Loan. The Federal Pell Grant, Ohio Instructional Grant and Federal Supplemental Educational Opportunity Grant may not be received. Postbaccalaureate students may only apply for Subsidized and Unsubsidized Stafford Loans.

A graduate assistantship is available through various graduate departments. A graduate fellowship and other graduate awards are distributed by the Graduate School; therefore, a separate application is required.

### **Guest Students**

A guest student is one who is taking classes at The University of Akron but will receive the degree at another institution. Contact the Office of Student Financial Aid for written instructions on how to receive financial aid.

### **International Students**

A student in the United States on a student or other temporary visa is not eligible for any state or federal financial aid. Application for scholarships, short-term loans, and some types of employment may be made.

### **Veterans**

A veteran may be eligible to receive educational benefits through the Veterans Administration and should contact the Veterans Office at the University for details.

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## **Student Rights and Responsibilities**

A student who applies for student financial aid has the right to expect confidentiality regarding all personal information. After submitting applications, the student should expect to receive a reply in a reasonable amount of time. It is the student's responsibility to notify the Office of Student Financial Aid of any changes in name, address, graduation plans, etc. A student must also report any outside scholarships received. It is the student's responsibility to be aware of the types and amounts of aid received.

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## **Standards of Satisfactory Progress**

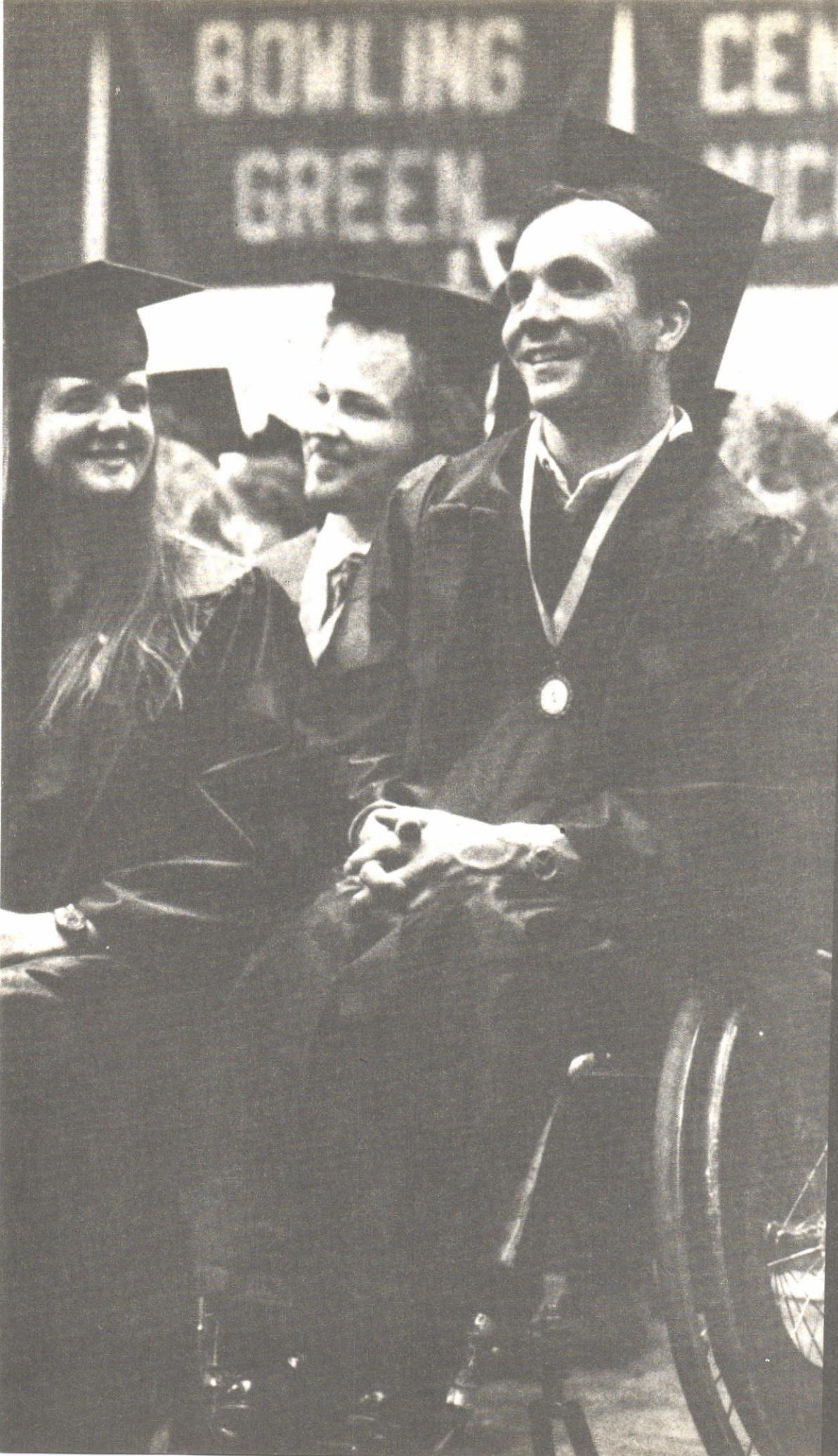
To receive or maintain eligibility for federal financial aid, the student must meet the requirements outlined in the "Standards of Satisfactory Progress" policy. The policy states that a student must make progress toward a degree. This rule applies to each potential financial aid recipient, whether or not a previous aid recipient. A copy of this policy is available in the Office of Student Financial Aid.

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## **Inquiries**

Since the process of applying for financial aid may at first seem complicated, it is suggested that families contact a high school counselor or a University financial aid officer for additional information. Direct inquiries to:

**Office of Student Financial Aid**  
Spicer Hall 119  
The University of Akron  
Akron, OH 44325-6211  
Phone: (216) 972-7032



# 4

Undergraduate  
academic  
programs

# Community and Technical College

Frederick J. Sturm, Ed.D., *Dean*  
Minnie C. Pritchard, M.S.T.E., *Associate Dean*  
Don V. Laconi, M.Ed., *Assistant to the Dean, Advising Services*

## OBJECTIVES

The Community and Technical College helps to further the goals and purposes of the University by emphasizing the following objectives:

- The college serves the student by providing the means to examine academic and career opportunities considering interests, abilities and achievements.
- The college provides for industry, business, government agencies, health-care establishment and human service occupations; pre-service and in-service training for entry-level positions or advancement in employment.
- Consistent with the philosophy of learning as a life-long experience, the college provides educational opportunities for the student no matter the age, background and need; full- or part-time, day or evening.
- The college provides quality instruction with qualified and experienced teachers who are encouraged to use the community as a "laboratory" for achieving educational goals.

The college recommends each student for the appropriate degree in accordance with the level of accomplishment.

The college offers both pre-service and in-service training; pre-service for the recent high school graduate who can receive an associate degree upon the satisfactory completion of two years of full-time studies; and in-service through evening courses where employed persons may pursue the same degrees while working full time. The college also offers some bachelor's degrees, certificates and minors.

## COLLEGE REQUIREMENTS

### Baccalaureate Degrees

The baccalaureate-level programs in Engineering Technology are intended to fill the widening gap in modern industry between the professional engineer and the engineering technician. The graduate of a program works in close support of engineers, translating conceptual ideas into functioning systems and providing supervisory direction for the implementation of these ideas by technicians and craftsmen.

These programs are designed as transfer programs to permit the qualified engineering technology student to continue education to the baccalaureate degree. During the first and second years, a student follows an associate degree program in the corresponding engineering technology. The third and fourth years provide the additional study required for the baccalaureate degree. Emphasis is placed on advanced training in the student's field of specialization, broadened knowledge of related technical fields, extended general education and basic management training.

The programs are available in automated manufacturing engineering technology, electronic engineering technology, and mechanical engineering technology. It is intended that a graduate will find employment in manufacturing, technical sales and service, application engineering, inspection and testing and the more standardized aspects of engineering design.

The requirements for the Bachelor of Science in Automated Engineering Manufacturing Technology, the Bachelor of Science in Electronic Engineering Technology, or the Bachelor of Science in Mechanical Engineering Technology are as follows:

- Compliance with the general University requirements for a baccalaureate degree as listed in this Bulletin.
- Compliance with the requirements of the General Education program as outlined in this Bulletin.
- Completion of the requirements for the associate degree in a related engineering technology at The University of Akron or other accredited institution.

- Successful completion of a minimum of 136 credits in BSAMET, 136 credits in BSMET, and 138 in the BSEET Program including associate degree program, general education courses, and the following course requirements.

### Bachelor of Science in Automated Manufacturing Engineering Technology

The Bachelor of Science in Automated Manufacturing Engineering Technology is offered as a "plus-two" program the second two years of a baccalaureate degree. A Manufacturing Engineering Technology associate degree program serves as the first two years. Although an associate manufacturing program is cited, graduates from other related associate programs can frequently enter the program with little or no bridgework.

Third- and fourth-year requirements:		Credits
3300:112	English Composition	3
3400:210	Humanities in the Western Tradition I	4
—:—	Humanities Requirement (see adviser)	4
—:—	Area Studies/Cultural Diversity Requirement (see adviser)	4
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
2040:247	Survey of Basic Economics	2
2030:345	Basic Techniques for Data Analysis	3
2030:356	Calculus for Technical Applications	2
2820:310	Programming for Technologists	3
2820:111	Introductory Chemistry	3
2870:301	Computer Control of Automated Systems	2
2870:311	Computer Aided Drafting II	2
2870:420	Materials and Processes	2
2870:470	Simulation of Manufacturing Systems	2
2870:480	Automated Manufacturing	2
2870:490	Manufacturing Project	3
2920:310	Economics of Technology	3
2920:348	CNC Programming I	3
2920:448	CNC Programming II	3
2940:210	Computer Drafting	3
6500:301	Management: Principles and Concepts	3
6500:330	Principles of Operations Management	3
6500:435	Quality Control	3
	Technical Electives	5

### Bachelor of Science in Electronic Engineering Technology

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology) (TAC/ABET)

For the first- and second-year requirements, see associate degree program in 2860: Electronic Engineering Technology.

Third- and fourth-year requirements:		Credits
3300:112	English Composition	3
3400:210	Humanities in the Western Tradition I	4
—:—	Humanities Requirement (see adviser)	6
—:—	Area Studies/Cultural Diversity Requirement (see adviser)	4
2030:345	Basic Techniques for Data Analysis	2
2030:356	Calculus for Technical Applications	3
2820:111	Introductory Chemistry	3
2860:350	Advanced Circuit Theory	4
2860:352	Microprocessor Systems	4
2860:354	Advanced Circuit Applications	3
2860:400	Computer Simulations in Technology	3
2860:406	Communication Systems	4
2860:453	Control Systems	3
2920:310	Economics of Technology	2
—:—	Computer Programming Elective	3
6500:301	Management Principles and Concepts	3
6500:330	Principles of Operations Management	3
7600:106	Effective Oral Communication	3
	Technical Electives	5
Electronic Technology Electives:		
2860:451	Industrial Electronic Systems	3
	or	
2860:420	Biomedical Electronic Instrumentation	3
	or	
2860:430	Senior Topics in Electronic Technology	3

Prior to enrolling in the program and to taking 2860:350 Advanced Circuits, a student must have completed at least 45 credits of a two-year electronic technology associate degree program; maintained a grade-point ratio of 2.00 or higher in major courses (Mathematical Analysis or equivalent, Basic Physics or equivalent, and technical courses in the 2860 or 2900 series or equivalent); and maintained a minimum overall grade-point ratio of 2.00.

## Bachelor of Science in Mechanical Engineering Technology

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology) (TAC/ABET)

For first- and second-year requirements, see associate degree program in mechanical engineering technology.

Third- and fourth-year requirements:	Credits	
2030:356	Calculus for Technical Applications	3
2040:247	Survey of Basic Economics	3
2820:310	Programming for Technologists	2
2820:111	Introductory Chemistry I	3
2820:112	Introductory and Analytical Chemistry	3
2860:270	Survey of Electronics I	3
2860:271	Survey of Electronics II	3
2880:241	Intro to Quality Assurance	3
2920:244	Dynamics	2
2920:310	Economics of Technology	3
2920:346	Mechanical Design III	4
2920:347	Applications of Material Technology	3
2920:348	CNC Programming I	3
2920:365	Applied Thermal Energy II	2
2920:370	Plastics Design and Processing	3
2920:402	Mechanical Projects	1
2920:405	Industrial Machine Control	3
2920:448	CNC Programming II	3
2920:470	Plastics Laboratory and Testing	2
3300:112	English Composition	3
3400:210	Humanities in the Western Tradition I	4
-----	Humanities Requirement (see adviser)	6
-----	Area Studies/Cultural Diversity Requirement (see adviser)	4
6500:301	Management Principles and Concepts	3

Prior to enrolling in the program, a student must have completed at least 45 credits of the two-year program with a grade-point ratio of 2.00 or higher in Math for Engineering Technology, Technical Physics and technical courses (2920 series) in the two-year program; and a minimum overall grade-point ratio of 2.00.

## Associate Degrees

Specialized technical programs are offered in the following divisions of the college:

Allied Health Technology  
Associate Studies  
Business Technology  
Engineering and Science Technology  
Public Service Technology

These programs lead to the Associate in Applied Science, Associate in Applied Business (carrying a designation of the specific program), and Associate of Technical Study. In addition, a program in liberal arts leading to the Associate of Arts and a program leading to the Associate of Individualized Studies are offered in the Associate Studies Division.

## Requirements for Graduation

Candidates for the associate degree must have the following:

- Complete the required courses listed in the program.  
Complete as a minimum, the number of credits listed for each program.
- Earn a minimum grade-point average of 2.00 in all work taken at The University of Akron.
- Be recommended by the faculty.  
Spend the last semester in residence (earning a minimum of 16 credits) at the University unless excused by the dean of the college.
- Complete other University requirements as in "Requirements for Graduation," **Section 3** in this Bulletin.

A student who expects to receive a second associate degree must earn a minimum of 16 credits in residence which have not counted toward the student's first degree.

## Cooperative Education

Minimum requirements for cooperative education students include the following:

- Enrollment in a program of study offered by the Community and Technical College wherein cooperative education has been established.
- Minimum grade-point average of 2.00 for all University of Akron course work and a minimum of 2.00 for all course work applicable to program of study.
- Completion of specific courses and/or credits for a particular program as approved by the college faculty.

## Minor Areas of Study

For an explanation of minor areas of study in the Community and Technical College, see **Section 5** of this Bulletin.

## PROGRAMS OF INSTRUCTION

### Allied Health

#### 2730: Histologic Technology \*

A histologic technician prepares sections of body tissue for microscopic examination by a pathologist. The technician specializes in techniques involving the use of the electron microscope and special studies which determine a patient's diagnosis.

	Credits	
2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Math II	2
2030:153	Elements of Math III	2
2040:240	Human Relations	3
2040:242	American Urban Society	3
2730:225	Histotechnology Practicum	5
2740:120	Medical Terminology	3
2840:101	Introduction to Chemistry	3
2840:102	Introductory and Analytical Chemistry	3
3100:111	Principles of Biology	4
3100:112	Principles of Biology	4
3100:130	Principles of Microbiology	3
3100:265	Introduction to Human Physiology	4
3100:365	Histology I	3
3100:366	Histology II	3
3100:383	Laboratory Techniques and Instrumentation in Biology	2
3100:384	Techniques and Instrumentation Laboratory in Biology	1
3850:342	Sociology of Health and Illness	3
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	Electives	4

#### 2740: Medical Assisting Technology

This program provides students with the background to perform receptionist, record keeping and general office duties and to assist physicians in examining patients, performing simple laboratory tests and helping with treatment in physicians' offices, clinics and hospital outpatient departments.

2020:121	English	4
2040:240	Human Relations	3
2040:244	Death and Dying	2
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding	3
2740:100	Introduction to Medical Assisting	2
2740:120	Medical Terminology	3
2740:121	Study of Disease Process for Medical Assisting	3
2740:135	Medical Assisting Techniques I	4
2740:230	Basic Pharmacology	3
2740:235	Medical Assisting Techniques II	4
2740:240	Medical Machine Transcription	3
2740:241	Medical Records	3
2740:260	Externship in Medical Assisting	3
2780:106.7	Anatomy and Physiology for Allied Health I, II	6
5540:xxx	Physical Education	1
5550:211	First Aid	2
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

#### 2760: Radiologic Technology

This program prepares graduates to perform radiologic examinations under a physician's direction for diagnosis and treatment of physical diseases and injuries. Although the University is authorized to offer the associate degree in radiologic technology, this degree program is not fully operational on campus at this time but is offered in conjunction with two area hospital schools of radiology.

\* Limited enrollment program, contact college for details.

A student who satisfactorily completes an accredited program in radiologic technology at a hospital school having an affiliation with the University may earn the associate degree by completing additional courses at the University. The student will then receive a block of credit for the hospital program that is applicable only to the associate degree in radiologic technology. (Selective Admission)

The degree requirements for the student are as follows:

		Credits
2020:121	English	4
2030:130	Introduction to Technical Mathematics	3
2040:240	Human Relations	3
2780:106	Anatomy and Physiology for Allied Health I or	3
3100:208	Human Anatomy and Physiology	4
2780:107	Anatomy and Physiology for Allied Health II or	3
3100:209	Human Anatomy and Physiology	4
2760:161	Physical Science for Radiologic Technology I	2
2760:165	Radiographic Principles	3
2760:261	Physical Science for Radiologic Technology II	3
3750:100	Introduction to Psychology	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	General Electives	2
	Credits for Hospital Program	41

Radiology schools at the following hospitals are affiliated with the University:

Children's Hospital Medical Center of Akron  
Summa Health Systems (Akron City and St. Thomas hospitals)

Applications for admission to these programs should be made directly to the hospital school.

### 2770: Surgical Assisting Technology \*

This program trains people to prepare equipment and assist the physician and other members of the surgical team with patient care and related services in the hospital operating room. Selective admission.

#### Surgical Technologist Option

2020:121	English	4
2030:130	Introduction to Technical Mathematics	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
2740:120	Medical Terminology	3
2740:230	Basic Pharmacology	3
2770:100	Introduction to Surgical Assisting Technology	4
2770:121	Surgical Assisting Procedures I	2
2770:131	Clinical Application I	2
2770:148	Surgical Anatomy I	3
2770:222	Surgical Assisting Procedures II	4
2770:232	Clinical Application II	5
2770:233	Clinical Application III	5
2840:100	Basic Chemistry	3
3100:130	Principles of Microbiology	3
3100:208	Human Anatomy and Physiology	4
3100:209	Human Anatomy and Physiology	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	General Elective	2

#### Surgeon's Assistant Option (Inactive)

2020:121	English	4
2040:240	Human Relations	3
2040:242	American Urban Society	3
2740:120	Medical Terminology	3
2740:230	Basic Pharmacology	3
2770:100	Introduction to Surgical Assisting Technology	4
2770:121	Surgical Assisting Procedures I	2
2770:148	Surgical Anatomy I	3
2770:151	Clinical Experience I	2
2770:152	Clinical Experience II	3
2770:153	Clinical Experience III	5
2770:243	Introduction to Medicine	2
2770:244	Medical History and Physical Evaluation	2
2770:245	Roentgenogram Assessment	1
2770:246	Medical Laboratory Procedures	1
2770:247	Pulmonary Assessment and Electrocardiography	2
2770:249	Surgical Anatomy II	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

2770:254	Clinical Experience IV	3
2770:255	Clinical Experience V	5
2770:256	Primary Care: Clinical Experience	2
3100:130	Principles of Microbiology	3
3100:208	Anatomy and Physiology	4
3100:209	Anatomy and Physiology	4
	General Electives	3

### 2790: Respiratory Care \*

This program prepares persons, under the supervision of a physician, to administer medical gases, medications and operate equipment in the medical care of patients with respiratory disorders. Selective admission.

2020:121	English	4
2020:222	Technical Report Writing	3
2030:130	Introduction to Technical Mathematics	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
2780:106,7	Anatomy and Physiology for Allied Health I, II	6
2790:121	Introduction to Respiratory Care	3
2790:122	Respiratory Patient Care	3
2790:123	Mechanical Ventilators	3
2790:131	Clinical Application I	3
2790:132	Clinical Application II	2
2790:133	Clinical Application III	5
2790:134	Clinical Application IV	5
2790:141	Pharmacology	2
2790:242	Pathology for Respiratory Care	3
2790:201	Anatomy and Physiology of Cardiopulmonary System	3
2790:223	Advanced Respiratory Care	3
2790:224	Pulmonary Rehabilitation and the Respiratory Care Department	2
2840:100	Basic Chemistry	3
3100:130	Principles of Microbiology	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Electives	2

## Associate Studies

### 2020: Arts

Through basic course work and general education, this program is intended to produce a socially intelligent individual, one who understands effective social values as well as scientific facts.

2020:121	English	4
3300:112	English Composition II	3
—	Natural Science Requirement †	8
—	Area Studies/Cultural Diversity Requirement (see adviser)	4
3400:210	Humanities in the Western Tradition I (see adviser)	4
—	Humanities Requirement	6
2040:240	Human Relations ††	3
2040:242	American Urban Society ††	3
2040:247	Survey of Basic Economics ††	3
3450:xxx	Math Requirement	4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking or	3
7600:106	Effective Oral Communication	3
	Electives	21

### 2100: Individualized Study

The Associate of Individualized Study (AIS) is designed for students whose educational goals cannot be met through one of the structured associate degree programs. It makes available a program of study which combines course work from various disciplines and focuses on education for individual development.

A student at The University of Akron may apply for the AIS program by meeting with the AIS coordinator and submitting the AIS application. The purpose of this procedure is to determine the appropriateness of the program for the student; and, with the assistance of the AIS coordinator, to select the areas of study.

Although students assume the responsibility for the selection of their areas of study, they must receive assistance and approval from the Coordinator of the AIS program. Requirements for graduation from the AIS program are:

- Completion of:  
— course 2100:190 Individualized Study Evaluation;

\* Deadline for application to the program is April 15.

† At least two courses, one of which must be a lab course

†† See "The University College," Section 4 of this Bulletin for alternate course options.

\* Deadline for application to the program is April 15.

- minimum of 40 credits in the AIS program after acceptance to the program;
- minimum of 20 credits of Community and Technical College courses;
- minimum of 16 credits in the General Course Category;
- at least one-half of the courses in the approved areas of concentration at the 200 or above level number equally divided among the selected areas;
- all other University of Akron requirements for graduation.

- Areas of concentration will be formed by courses drawn from a minimum of two and a maximum of four instructional areas.
- AIS degree will not be awarded in any combination of areas of concentration for which The University of Akron offers either an associate or baccalaureate degree.
- Areas of concentration must serve a coherent educational or occupational goal.
- Only previous coursework completed with a grade of "C" or higher may be applied toward the AIS degree.

**2240: Commercial Art (Inactive)**

This program enables individuals to gain skills as artists and designers for employment involving the development of materials included in visual advertising and communication for art studios, advertising agencies, and industry.

		Credits
2020:121	English	4
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2240:124	Design in Commercial Art	3
2240:130	Marker Rendering	3
2240:140	Typography and Lettering	3
2240:242	Advertising Layout Design	3
2240:245	Designing for Production	3
2240:247	Packaging Design	3
2240:248	Publication Design	3
2300:122	Introduction to Commercial Photography	3
2440:120	Computer and Software Fundamentals	2
2520:103	Advertising Principles	3
5540:xxx	Physical Education	1
7100:131	Introduction to Drawing	3
7100:132	Instrument Drawing	3
7100:233	Life Drawing	3
7100:275	Introduction to Photography	3
	Technical Studio Electives	7
	General Electives	7

The seven hours of Technical Studio Electives must come from the following list of courses:

2240:290	Special Topics: Commercial Art (Any and all listings)	1-3
2240:290	Special Topics: Offset Lithography	3
2240:290	Special Topics: Beginning Typesetting	3
2240:295	Practicum in Commercial Art	1-3
2300:160	Portrait/Fashion Photography	3
2300:170	Illustration/Advertising Photography	3
2300:230	Multi-Image Production	3
2300:250	Advanced Commercial Photography	3
2300:260	Professional Photographic Practices	3
7100:185	Computer Graphics for Art I	3
7100:214	Introduction to Screen Printing	3
7100:215	Introduction to Relief Printing	3
7100:216	Introduction to Intaglio Printing	3
7100:246	Introduction to Watercolor Painting	3
7100:248	Introduction to Airbrush Painting	3
7100:283	Drawing Techniques	3
7100:285	Computer Graphics for Art II	3
7100:317	Printmaking II	3
7100:385	Computer Graphics for Art III	3
7100:480	Advanced Graphic Design	3
7100:482	Corporate Identity & Graphic Systems	3
7100:484	Illustration	3
7100:485	Advanced Illustration	3
7100:489	ST: Illustrative Cartooning	3
7100:491	Architectural Presentations I	3
7100:492	Architectural Presentations II	3

It is recommended that the seven hours of General Electives for both Commercial Art and Commercial Photography majors come from the following list of courses:

2020:222	Technical Report Writing	3
2020:224	Writing for Advertising	4
2040:240	Human Relations	3
2040:241	Technology and Human Values	2

		Credits
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2040:254	The Black American	2

**2300: Commercial Photography (Inactive)**

The Commercial Photography program provides comprehensive hands-on training in varied commercial photography specialties, preparing students for entry-level employment in commercial photography studios, professional portrait studios, advertising agencies and industry.

2020:121	English	4
2020:224	Writing for Advertising	4
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	
	or	
2040:251	Human Behavior at Work	3
2240:124	Design in Commercial Art	3
2300:122	Intro to Commercial Photography	3
2300:160	Portrait/Fashion Photography	3
2300:170	Illustration/Advertising Photography	3
2300:230	Multi-Image Production	3
2300:240	Commercial Photography Practicum	3
2300:241	Commercial Photography Practicum Evaluation	1
2300:250	Advanced Commercial Photography	3
2300:260	Professional Photographic Practices	3
2300:270	Commercial Photography Portfolio	1
2300:290	Special Topics: Commercial Photography	1-3
7100:131	Introduction to Drawing	3
7100:275	Introduction to Photography	3
	Technical Studio Electives	9
	General Electives	5

The nine hours of Technical Studio Electives for Commercial Photography majors must come from the following list of courses:

2240:130	Marker Rendering	3
2240:140	Typography and Lettering	3
2240:242	Advertising Layout Design	3
2240:245	Designing for Production	3
2240:247	Packaging Design	3
2240:248	Publication Design	3
2240:290	Special Topics: Commercial Art (Any and all listings)	1-3
2300:290	Special Topics: Commercial Photography (Any and all listings)	1-3
7100:121	Three-Dimensional Design	3
7100:144	Two-Dimensional Design	3
7100:213	Introduction to Lithography	3
7100:214	Introduction to Screen Printing	3
7100:215	Introduction to Relief Printing	3
7100:216	Introduction to Intaglio Printing	3
7100:222	Introduction to Sculpture	3
7100:231	Drawing II	3
7100:233	Life Drawing	3
7100:246	Introduction to Watercolor Painting	3
7100:254	Introduction to Ceramics	3
7100:266	Introduction to Metals	3
7100:283	Drawing Techniques	3
7100:285	Computer Graphics for Art II	3
7100:317	Printmaking II	3
7100:375	Photography II	3
7100:385	Computer Graphics for Art III	3
7100:475	Advanced Photography	3

**Business Technology**

**2280: Hospitality Management**

Through educational and technical skills offered in a professional environment, this program emphasizes the development of expertise in food service management or culinary arts.

**Options**

**Restaurant Management**

2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2280:120	Safety and Sanitation	3
2280:121	Fundamentals of Food Preparation I	4

2280:122	Fundamentals of Food Preparation II	4
2280:123	Meat Technology	2
2280:135	Menu Planning and Purchasing	3
2280:232	Dining Room Service and Training	2
2280:233	Restaurant Operations and Management	4
2280:238	Cost Control Procedures	3
2280:237	Internship	1
2280:240	Systems Management and Personnel	3
2280:243	Food Equipment and Plant Operations	3
2280:265	Beverage Operations	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
	or	
2540:263	Business Communications	3
2420:280	Essentials of Law	3
2520:103	Principles of Advertising	3
	or	
2440:120	Computer and Software Fundamentals*	2
2540:119	Business English	3
5540:xxx	Physical Education	1
<b>Culinary Arts</b>		
2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2280:120	Safety and Sanitation	3
2280:121	Fundamentals of Food Preparation I	4
2280:122	Fundamentals of Food Preparation II	4
2280:123	Meat Technology	2
2280:135	Menu Planning and Purchasing	3
2280:160	Wine and Beverage Service	3
2280:232	Dining Room Service and Training	2
2280:238	Cost Control Procedures	3
2280:237	Internship	1
2280:233	Restaurant Operations and Management	4
2280:240	Systems Management and Personnel	3
2280:261	Baking and Classical Desserts	3
2280:262	Classical Cuisine	3
2280:263	International Foods	2
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
	or	
2540:263	Business Communications	3
2420:280	Essentials of Law	3
2540:119	Business English	3
5540:xxx	Physical Education	1
7400:133	Nutrition Fundamentals	3
<b>Hotel/Motel Management (Inactive)</b>		
2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2230:153	Principles of Fire Protection and Life Safety	3
2280:120	Safety and Sanitation	3
2280:135	Menu Planning and Purchasing	3
2280:150	Front Office Procedures	3
2280:152	Maintenance and Engineering for Hotels and Motels	3
2280:232	Dining Room Service and Training	2
2280:237	Internship	1
2280:238	Cost Control Procedures	3
2280:240	Systems Management and Personnel	3
2280:254	Hotel/Motel Housing Management	3
2280:255	Hotel/Motel Sales Promotion	3
2280:256	Hospitality Law	3
2280:265	Beverage Operations	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
	or	
2540:263	Business Communications	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals*	2
	or	
2520:103	Principles of Advertising	3
2540:119	Business English	3
5540:xxx	Physical Education	1

<b>Hospitality Marketing and Sales</b>		Credits
2020:121	English	4
2020:222	Technical Report Writing	3
2040:247	Survey of Basic Economics	3
2280:120	Safety and Sanitation	3
2280:121	Fundamentals of Food Preparation I	4
2280:135	Menu Planning and Purchasing	3
2280:233	Restaurant Operations and Management	4
2280:238	Cost Control Procedures	3
2280:237	Internship	1
2280:240	Systems Management and Personnel	3
2280:243	Food Equipment and Plant Operations	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
	or	
2540:263	Business Communications	3
2420:280	Essentials of Law	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:212	Principles of Sales	3
2540:119	Business English	3
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

**2420: Business Management Technology**

This program provides comprehensive training in varied business activities which prepare for beginning management or supervisory-level positions in business, industry or self-employed management.

**Options****General**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:103	Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:121	Office Management	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2440:125	Lotus 1-2-3	2
2540:119	Business English	3
2540:263	Business Communications	3
2560:110	Principles of Transportation	3
2880:232	Labor Management Relations	3
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
	Electives	4

**Accounting**

2020:121	English	4
2040:240	Human Relations	3
	or	
2040:251	Human Behavior at Work	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
	or	
2420:202	Personnel Practices	3
2420:103	Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:213	Basic Accounting III	3
2420:214	Essentials of Intermediate Accounting*	3
2420:216	Survey of Cost Accounting*	3
2420:217	Survey of Taxation*	4
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2440:125	Lotus 1-2-3	2

\* Students enrolled in 2440:120 Computer and Software Fundamentals must complete two semesters of 2280:237 Internship.

\* Course is not transferable to College of Business Administration.

Credits

2440:151	PC DOS Fundamentals	1
2440:245	Introduction to Database III+/IV	3
2540:119	Business English	3
2540:xxx	Skills Elective †	2
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

**Banking (Inactive)**

2020:121	English	4
2040:240	Human Relations	3
	or	
3750:100	Introduction to Psychology	3
2020:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:103	Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:113	Introduction to Banking	2
2420:123	Federal Regulation of Banking	2
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:233	Installment Credit	2
2420:243	Survey in Finance	3
2420:253	Elements of Bank Management	2
2420:273	Monetary Systems and the Payments Mechanism	3
2420:280	Essentials of Law	3
2430:105	Real Estate Principles	2
2430:245	Real Estate Finance	2
2440:120	Computer and Software Fundamentals	2
2540:119	Business English	3
2540:263	Business Communications	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

**Credit Union (Inactive)**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:103	Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:105	Introduction to Credit Unions	2
2420:115	Credit Union Operations	2
2420:125	Personal Financial Counseling	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:221	Administrative Office Supervision	2
2420:225	Credit Union Lending and Collections	2
2420:243	Survey in Finance	3
2420:245	Credit Union Financial Management	2
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2540:119	Business English	3
2540:263	Business Communications	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Technical Electives	2

Recommended Electives:

2420:101	Elements of Distribution	3
2420:221	Administrative Office Supervision	2
2440:239	RPG II Programming	1
2880:232	Labor-Management Relations	3
2540:125	Electronic Business Calculations	2

**Data Administration**

2020:121	English	4
2030:130	Introduction to Technical Mathematics	3
	or	
2420:101	Elements of Distribution	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:103	Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3

Credits

2440:120	Computer and Software Fundamentals	2
2440:121	Introduction to Programming Logic	2
2440:125	Lotus 1-2-3	2
2440:133	Structured COBOL Programming	2
2440:151	PC DOS Fundamentals	1
2440:220	Software Applications for Business	2
2440:245	Introduction to dBase III/IV	3
2540:119	Business English	3
2540:263	Business Communications	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Electives	3

**Small Business Management**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:103	The Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:117	Small Business Development	3
2420:118	Small Business Management and Operations	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:227	Entrepreneurship Projects	4
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2450:119	Business English	3
2520:103	Principles of Advertising	3
2540:263	Business Communications	3
	Electives	2

Recommended Electives:

2040:254	The Black American	2
2420:111	Public Relations	2
2420:233	Installment Credit	2
2520:106	Visual Promotion	3
2520:201	Principles of Wholesaling	2
2520:202	Retailing Fundamentals	3
2520:210	Consumer Service Fundamentals	2
2520:211	Mathematics for Retail Distribution	3
2520:212	Principles of Sales	3
2540:125	Electronic Business Calculations	2
2540:140	Keyboarding for Nonmajors	2
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

**2430: Real Estate (Inactive)**

Designed to educate the student in all areas of the field, this program prepares students for entry-level positions in sales and management in the real estate industry through the study of products, professions and processes involving real estate.

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business	3
2420:121	Office Management	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2430:105	Real Estate Principles	2
2430:185	Real Estate Law	2
2430:245	Real Estate Financing	2
2430:255	Valuation of Residential Property	2
2430:265	Real Estate Brokerage	2
2430:275	Real Estate Project	2
2440:120	Computer and Software Fundamentals	2
2520:212	Principles of Sales	3
2540:119	Business English	3
2540:263	Business Communications	3
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
	Electives	6

† Student shall select one of the following courses: 2540:125 Electronic Business Calculations (2); 2540:140 Keyboarding for Nonmajors (2); 2540:141 PC Word Processing for Nonmajors (2).

### 2440: Computer Programming Technology

This program prepares graduates to enter the job market as computer programmers for business and industry. Emphasis of the curriculum is on programming computers to solve business problems.

		Credits
2020:121	English	4
2030:151	Elements of Math I	2
2030:161	Math for Modern Technology	4
2020:222	Technical Report Writing	3
	or	
2540:263	Business Communications	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business	3
2420:211,12	Basic Accounting I, II	6
2440:120	Computer and Software Fundamentals	2
2440:121	Introduction to Programming Logic	2
2440:131	Introduction to Programming	2
2440:132	Assembler Programming	2
2440:133	Structured COBOL Programming	3
2440:234	Advanced COBOL Programming	3
2440:241	Systems Analysis and Design	3
2440:251	Computer Applications Projects	4
2440:252	Job Control Language	2
2440:263	Data Base Concepts	3
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
	Computer Programming Electives	5
Computer Programming Electives:		
2440:235	Current Programming Topics	2
2440:239	RPG II Programming	2
2440:243	Information Center Practicum	3
2440:261	CICS	3
2440:262	COBOL Efficiency	2
2440:267	4GL for Micros: dBase III Plus	3
2440:269	C Programming and UNIX	3

### 2520: Marketing and Sales Technology

This program equips graduates to fill entry-level positions in distributive business areas including retailing, industrial distribution and fashion.

#### Core Program

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2520:103	Principles of Advertising	3
2520:106	Visual Promotion	3
2520:202	Retailing Fundamentals	3
2520:210	Consumer Service Fundamentals	2
2520:211	Mathematics of Retail Distribution	3
2520:212	Principles of Sales	3
2540:119	Business English	3
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	Option Requirements	16

Suggested Electives:		
2520:221	AAF Advertising Campaign I	2
2520:222	AAF Advertising Campaign II	2

#### Options

##### Advertising

Required Technical Courses:		
2020:224	Writing for Advertising	4
2420:202	Personnel Practices	3
2520:215	Advertising Projects	2
	and	
2520:217	Merchandising Projects	2
	or	
2520:219	Sales Projects	2
2520:234	Humor in Advertising	2
	Electives	3

Suggested Electives:		Credits
2420:243	Survey in Finance	3
2520:221	AAF Advertising Campaign I	2
2520:222	AAF Advertising Campaign II	2

##### Computer Sales (Inactive)

2440:125	Lotus 1-2-3	2
2440:151	PC DOS	1
2440:247	Microcomputer Hardware and Software Selection	3
2520:217	Merchandising Projects	2
2520:219	Sales Projects	2
2540:140	Keyboarding for Non-Majors	2
	or	
2540:141	PCWord Processing for Non-Majors	2
	Electives	4

##### Fashion

2420:202	Personnel Practices	3
7400:121	Textiles	3
7400:219	Clothing Communication	3
7400:221	Evaluation of Apparel	3
7400:239	The Fashion Industry	3
	Elective	1

Suggested elective:		
2520:217	Merchandising Projects	2

##### Retailing

2420:202	Personnel Practices	3
2420:243	Survey in Finance	3
2520:215	Advertising Projects	2
	or	
2520:219	Sales Projects	2
2520:217	Merchandising Projects	2
	Electives	6

##### Sales

Required Courses:		
2420:202	Personnel Practices	3
2420:243	Survey in Finance	3
2520:215	Advertising Projects	2
2520:217	Merchandising Projects	2
2520:219	Sales Projects	2
	Electives	4

Suggested Electives:		
2520:221	AAF Advertising Campaign I	2
2520:222	AAF Advertising Campaign II	2

### 2540: Office Administration

Preparing students for the different but often overlapping fields of administrative assisting, secretarial, word processing, information management, or clerical work, this program is based on personal career objectives. Students choose from program options that prepare them for positions in administrative assistant work; medical, legal, or international secretarial; or office/information management.\*\*

#### Options

##### Medical Secretarial

2020:121	English	4
2040:240	Human Relations	3
2040:244	Death and Dying	2
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Intro to Office Procedures	3
2540:125	Electronic Business Calculations	2
2540:129	Information/Records Management	3
2540:130	Intro to Office Automation	4
2540:151	Intermediate Keyboarding	3
2540:243	Internship	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4
2740:100	Intro to Medical Assisting	2
2740:120	Medical Terminology	3
2740:121	Study of Disease Processes for Medical Assisting	3
2740:240	Medical Machine Transcription	3
2740:241	Medical Records	3
5540:xxx	Physical Education	1
5550:211	First Aid	2
	Elective	1

\*\* Associate degree courses may be applied toward a four-year business education or technical education degree.

**International Secretarial**

	Credits	
2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:125	Electronic Business Calculations	2
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding	3
2540:243	Internship	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4
2540:281	Machine Transcription	3
xxxx:101	Beginning Language	4
xxxx:102	Beginning Language	4
xxxx:201	Intermediate Language	3
xxxx:202	Intermediate Language	3
5540:x	Physical Education	1
	General Elective	2

## Suggested Electives:

2020:222	Technical Report Writing	3
2040:242	American Urban Society	3
2040:241	Technology & Human Values	3
2040:244	Death and Dying	2
2040:251	Human Behavior at Work	3
2040:254	The Black American	2

**Legal Secretarial (inactive)**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Law	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:125	Electronic Business Calculations	2
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding	3
2540:243	Internship	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:255	Legal Office Procedures I	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4
2540:279	Legal Office Procedures II	4
2540:281	Machine Transcription	3
5540:xxx	Physical Education	1
	General Elective	2

## Suggested Electives:

2020:222	Technical Report Writing	3
2040:242	American Urban Society	3
2040:241	Technology and Human Values	3
2040:244	Death and Dying	2
2040:251	Human Behavior at Work	3
2040:254	The Black American	2

**Administrative Assistant**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:125	Electronic Business Calculations	2
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding	3
2540:243	Internship	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4
2540:281	Machine Transcription	3
5540:xxx	Physical Education	1
	Specialization Electives	10
	General Electives	2

## Recommended General Electives:

2020:222	Technical Report Writing	2
2040:242	American Urban Society	3
2040:241	Technology and Human Values	3
2040:244	Death and Dying	3
2040:251	Human Behavior at Work	3
2040:254	Black American	2

## Recommended Specialization Electives:

2540:131	Computerized Doc Control	4
2540:247	Automated Office System	4
2540:264	Advanced Business Communications	3
2540:248	Advanced Office Technologies	3
2540:265	Women in Management	3

**Office Information Management**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:125	Electronic Business Calculations	2
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:131	Computerized Document Control	4
2540:151	Intermediate Keyboarding	3
2540:243	Internship	3
2540:247	Automated Office Systems	4
2540:248	Advanced Office Technologies	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4
2540:281	Machine Transcription	3
5540:xxx	Physical Education	1
	General Elective	2

## Suggested General Electives:

2020:222	Technical Report Writing	3
2040:242	American Urban Society	3
2040:241	Technology and Human Values	3
2040:241	Death and Dying	2
2040:251	Human Behavior at Work	3
2040:254	The Black American	2

**2550: Office Services (inactive)**

7600:105	Introduction to Public Speaking	3
2020:121	English	4
2040:240	Human Relations	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
	or	
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Law	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:125	Electronic Business Calculations	2
2540:130	Introduction to Office Automation	4
2540:150	Beginning Keyboarding	3
2540:151	Intermediate Keyboarding	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:264	Advanced Business Communications	3
2540:275	Administrative Office Procedures	3
2540:281	Machine Transcription	3
5540:xxx	Physical Education	1
	General Elective	3

**2560: Transportation**

This program is aimed at developing technical knowledge and skills in the area of transportation management.

**Options****Airline/Travel Industry**

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:104	Introduction to Business	3

		Credits
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2520:212	Principles of Sales	3
2540:119	Business English	3
2540:140	Keyboarding for Nonmajors	2
	or	
2540:141	PC Word Processing for Nonmajors	2
2560:110	Principles of Transportation	3
2560:118	Air Transportation	2
2560:118	Transportation Rate System	3
2560:221	Traffic and Distribution Management	3
2560:228	Introduction to Travel	2
2560:229	Passenger Ticketing	2
2560:230	Tour Planning and Packaging	2
2560:231	Computerized Reservations I	2
2560:232	Computerized Reservations II	2
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication Elective	3
		1
<b>General</b>		
2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:104	Introduction to Business	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2540:119	Business English	3
2540:263	Business Communications	3
2560:110	Principles of Transportation	3
2560:115	Motor Transportation	3
2560:118	Air Transportation	2
2560:117	Water Transportation	2
2560:118	Transportation Rate Systems	3
2560:221	Traffic and Distribution Management	3
2560:222	Microcomputer Applications in Transportation	3
2560:224	Transportation Regulation	3
2560:227	Transportation of Hazardous Materials and Wastes	2
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

## Engineering and Science Technology

### 2830: Electromechanical Service Technology (Inactive)

This program is designed to prepare technicians to repair and maintain both the electrical and mechanical subsystems of manufacturing equipment.

2020:121	English	4
2030:151	Elements of Mathematics I	2
2030:152	Elements of Mathematics II	2
2040:240	Human Relations	3
2440:120	Computer and Software Fundamentals	2
2820:110	Physical Science for Technicians	3
2830:110	Electromechanical Devices	4
2830:130	Introduction to Hydraulics and Pneumatics	3
2830:210	Motion Control I	4
2830:220	Motion Control II	3
2830:230	Machine and Process Control	4
2830:240	Industrial Computer Control	3
2830:250	Programmable Controllers	3
2830:260	Electrical Power and Wiring	3
2830:270	Troubleshooting and Repair Practices	3
2860:110	Basic Electricity and Electronics	4
2880:110	Manufacturing Processes	2
2940:140	Survey of Engineering Technology	3
5540:xxx	Physical Education	1
	General Electives	8

### 2840: Polymer Technology

This program will prepare graduates for employment in the polymer processing industry. The student will learn the basic properties of plastic materials, how these properties are measured in a laboratory, and the various manufacturing procedures used to process plastics into finished products.

		Credits
2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Math IV	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2820:100	Introduction to Engineering Technology	2
2820:111	Introductory Chemistry	3
2820:131	Software Applications for Technology	1
2820:161	Technical Physics: Mechanics I	2
2820:164	Technical Physics: Heat and Light	2
2830:130	Introduction to Hydraulics and Pneumatics	3
2840:101	Introduction to Chemistry	3
2840:111	Polymer Technology I	3
2840:112	Polymer Technology II	3
2840:202	Instrumental Methods	3
2840:211	Polymer Technology III	3
2840:220	Case Studies in Polymer Design and Processing	2
2840:260	Compounding Methods	2
2840:281	Polymer Project	2
2860:110	Basic Electricity and Electronics	4
2880:100	Basic Principles of Manufacturing	4
2880:151	Industrial Safety and Environmental Protection	2
2880:241	Introduction to Quality Assurance	3
2940:180	Introduction to Computer Aided Drafting	1
	General Electives	3

### 2860: Electronic Engineering Technology

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.) (TAC/ABET)

This program prepares individuals for work as technicians in developing, manufacturing, installing, testing and maintaining electronic equipment and systems.

2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Math IV	3
2030:255	Elements of Calculus II	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2820:121	Technical Computations	1
2820:161	Technical Physics: Mechanics I	2
2820:162	Technical Physics: Mechanics II	2
2820:164	Technical Physics: Heat and Light	2
2860:120	DC Circuits	4
2860:122	AC Circuits	3
2860:123	Electronic Devices	3
2860:136	Introduction to Digital Concepts	1
2860:225	Electronic Devices Applications	4
2860:231	Control Principles	3
2860:237	Digital Circuits	4
2860:238	Microprocessor Fundamentals	4
2860:242	Machinery and Controls	4
2860:251	Communications Circuits	3
2860:255	Electronic Design and Construction	2
2860:260	Electronics Project	2
5540:xxx	Physical Education	1

### 2880: Manufacturing Engineering Technology

Through the study of basic technical subjects and through concentration on work measurement, manufacturing computer applications, quality control, robotics, manufacturing work cells, and MRPII, this program educates the student in the areas of analysis, design and management of the resources, facilities and people involved in modern manufacturing.

#### Options

##### Computer-Aided Manufacturing Option

2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2

		Credits
2030:154	Elements of Math IV	3
2030:255	Elements of Calculus	3
2040:240	Human Relations	3
2820:121	Technical Computations	1
2820:161	Technical Physics: Mechanics I	2
2820:162	Technical Physics: Mechanics II	2
2820:163	Technical Physics: Electricity and Magnetism	2
2880:100	Basic Principles of Manufacturing Management	4
2880:130	Work Measurement and Cost Estimating	3
2880:201	Robotics and Automated Manufacturing	3
2880:211	Computerized Manufacturing Control	3
2880:221	Survey of Machine Tools & CNC Machinery	3
2880:222	Computer Numerically Controlled Manufacturing	3
2880:232	Labor-Management Relations	3
2880:241	Introduction to Quality Assurance	3
2940:121	Technical Drawing I	3
2940:180	Introduction to CAD	1
5540:xxx	Physical Education	1
	Technical Electives	3
	General Electives	6

**Industrial Supervision Option**

2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Mathematics I	2
2030:152	Elements of Mathematics II	2
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2420:103	Role of Supervision in Management	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:280	Essentials of Law	3
2820:121	Technical Computations	1
2880:100	Basic Principles of Manufacturing Management	4
2880:110	Manufacturing Processes	2
2880:130	Work Measurement and Cost Estimating	3
2880:211	Computerized Manufacturing Control	3
2880:232	Labor Management Relations	3
2880:241	Introduction to Quality Assurance	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	General Electives	3
	Technical Electives	3
Technical Electives (two credits required from following):		
2030:142	Math for Data Processing II	3
2030:153	Elements of Math III	2
2420:243	Survey in Finance	3
2440:120	Computer and Software Fundamentals	2
2940:121	Technical Drawing I	3
General Electives (two credits required from following):		
2040:242	American Urban Society	3
2040:254	The Black American	2

**2920: Mechanical Engineering Technology**

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.) (TAC/ABET)

This program prepares individuals to work as technicians in developing, designing, manufacturing, testing and servicing mechanical equipment and systems.

2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Mathematics IV	3
2030:255	Elements of Calculus	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
2820:121	Technical Computations	1
2820:161	Technical Physics: Mechanics I	2
2820:162	Technical Physics: Mechanics II	2
2820:163	Technical Physics: Electricity and Magnetism	2
2820:164	Technical Physics: Heat and Light	2
2920:101	Introduction to Mechanical Design	2
2920:142	Introduction to Material Technology	3
2920:243	Kinematics	2
2920:245	Mechanical Design II	5
2920:247	Technology of Machine Tools	3

		Credits
2920:249	Applied Thermal Energy I	2
2920:251	Fluid Power	2
2920:252	Thermo-Fluids Laboratory	1
2940:121	Technical Drawing I	3
2940:210	Computer Aided Drawing I	3
2980:125	Statics	3
2980:241	Strength of Materials	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

**2940: Drafting and Computer Drafting Technology**

This program prepares an individual to work as a drafter by providing in-depth knowledge of drafting principles as well as computer-aided drafting. The program is designed to prepare the student to work in the major fields of technology, including electrical, architectural, mechanical, manufacturing, surveying, and structural technology. It will educate the individual to compile detailed drawings based on rough sketches, specifications and calculations made by engineers, architects and designers. This daytime program is especially suitable for those who have a special interest or talent for spatial visualization, but do not want an extensive coverage of advanced mathematics or physics.

2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Mathematics I	2
2030:152	Elements of Mathematics II	2
2040:240	Human Relations	3
2820:121	Technical Computations	1
2820:131	Software Applications for Technology	1
2880:110	Manufacturing Processes	2
2920:247	Technology of Machine Tools	3
2940:121	Technical Drawing I	3
2940:122	Technical Drawing II	3
2940:150	Drafting Design Problems	2
2940:170	Surveying Drafting	3
2940:200	Advanced Drafting	3
2940:210	Computer Aided Drawing I	3
2940:211	Computer Aided Drawing II	3
2940:230	Mechanical Systems Drafting	3
2940:240	Electrical and Electronic Drafting	3
2940:250	Architectural Drafting	3
2940:260	Drafting Technology Project	3
2980:231	Building Construction	2
2980:250	Structural Drawing	2
3350:340	Cartography	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	General Electives	6

**General Electives:**

2030:153	Elements of Mathematics III	2
2030:154	Elements of Math IV	3
2040:241	Technology and Human Values	2
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2040:254	The Black American	2

**2980: Surveying and Construction Engineering Technology**

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.) (TAC/ABET)

Designed to provide a foundation in mathematics, physics, technical drawing and communication skills, this program allows increased application of these areas in order to build an in-depth background in either construction or surveying.

**Options**

**Construction**

2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Mathematics IV	3
2030:255	Elements of Calculus	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2820:121	Technical Computations	1
2820:161	Technical Physics: Mechanics I	2

		Credits
2820:162	Technical Physics: Mechanics II	2
2820:163	Technical Physics: Electricity and Magnetism or	
2820:164	Technical Physics: Heat and Light	2
2940:121	Technical Drawing I	3
2980:122	Basic Surveying	3
2980:123	Surveying Field Practice	2
2980:125	Statics	3
2980:222	Construction Surveying	3
2980:231	Building Construction	2
2980:232	Construction	3
2980:234	Elements of Structures	3
2980:237	Materials Testing I	2
2980:238	Materials Testing II	2
2980:241	Strength of Materials	3
2980:245	Cost Analysis and Estimating	3
2980:250	Structural Drafting	2
5540:xxx	Physical Education	1
7600:106	Introduction to Public Speaking or	3
7600:106	Effective Oral Communications	3
<b>Surveying (Inactive)</b>		
2020:121	English	4
2020:222	Technical Report Writing	3
2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Mathematics IV	3
2030:255	Elements of Calculus	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2820:121	Technical Computations	1
2820:161	Technical Physics: Mechanics I	2
2820:162	Technical Physics: Mechanics II	2
2820:163	Technical Physics: Electricity and Magnetism or	
2820:164	Technical Physics: Heat and Light	2
2940:121	Technical Drawing I	3
2980:122	Basic Surveying	3
2980:123	Surveying Field Practice	2
2980:125	Statics	3
2980:222	Construction Surveying	3
2980:224	Land Surveying	3
2980:225	Advanced Surveying	4
2980:226	Subdivision Design	2
2980:232	Construction	3
2980:237	Materials Testing I	2
2980:241	Strength of Materials	3
3350:340	Cartography	3
5540:xxx	Physical Education	1
7600:106	Introduction Public Speaking or	
7600:106	Effective Oral Communications	3

## Associate of Technical Studies

The Associate of Technical Studies (ATS) program is available to adult "New Majority" students whose educational objectives and interests cannot be met through one of the formal associate degree programs.

### Requirements

- Completion of the ATS application, including the selection of a minimum of one and a maximum of three major areas of study with a reasonable selection of courses from each area.
- Approval of the ATS application by the ATS coordinator, the faculty in the appropriate division(s), the ATS Committee, and the dean of the Community and Technical College.
- Application toward the degree of only that transfer course category and 14 semester credits in the basic course category.
- Completion of at least one half of the technical courses taken at The University of Akron in the approved area(s) of study at the 200 level or higher, to be equally divided among the selection areas, where applicable.
- Completion of a total of 64 semester credits with a grade-point average of 2.0.
- Completion of all other graduation requirements of The University of Akron.

## 2960: Associate of Technical Studies — Automotive Technology

This program prepares persons to be competent automotive technicians with a breadth of general studies, which provides them with the communication and interaction skills needed for advancement in the automotive service industry.

The Community and Technical College of The University of Akron, the Portage Lakes Career Center in Greensburg, Ohio, and the Ford Motor Company cooperate in the program, which is known as ASSET (Automotive Student Service Educational Training). Students alternate school and employment in a Ford dealership in approximately eight-week sessions. Selective admission.

2021:121	English	4
2020:222	Technical Report Writing	3
2030:130	Introduction to Technical Math	3
2040:240	Human Relations	3
2040:241	Technology and Human Values	2
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2820:121	Technical Computations	1
2860:110	Basic Electricity and Electronics	4
2920:110	Fundamental Science for Automotive Technicians	4
5540:xxx	Physical Education	1
	Technical Credits from Portage Lakes Career Center	30

## Public Service Technology

### 2200: Educational Technology

This program prepares individuals for employment as elementary aides, assisting the professional teacher; library technicians, assisting the professional librarian or information specialist; or child development workers, filling a variety of staff positions in either a day-care center, nursery school or Head Start program with infants, toddlers, and pre-Kindergarten children. Graduates can own their own center, run a family day care home, or be a center director.

### Core Program

		Credits
2020:121	English	4
2030:130	Introduction to Technical Math	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
5540:xxx	Physical Education	1
5550:211	First Aid	2
5850:295	Education Technician Field Experience	5
7600:106	Effective Oral Communication	3
	Option Requirements	40

### Options

#### Child Development ††

2200:245	Infant/Toddler Day-Care Programs	3
2200:250	Observing and Recording Children's Behavior	3
5200:310	Introduction to Early Childhood Education	3
5200:315	Issues and Trends in Early Childhood Education	3
5200:360	Teaching in the Nursery Center	2
5200:370	Nursery Center Laboratory	2
5610:450	Special Education Programming: Early Childhood	3
7400:132	Early Childhood Nutrition	2
7400:265	Child Development	3
7400:270	Theory and Guidance of Play	3
7400:280	Creative Activities for Pre-Kindergarten Children	4
7400:448	Before and After School Child Care	2
7400:460	Organization and Supervision of Child Care Centers	3
	Humanities Elective *	2-4
	General Elective	0-2

Voluntary Pre-Kindergarten Associate Certification is available. See coordinator for other requirements for certification.

#### Elementary Aide (Inactive) ‡

2540:140	Keyboarding for Non-Majors	2
3750:100	Introduction to Psychology	3
5200:335	Teaching Language Arts	4
5850:207	Mechanics of Student Appraisal ‡‡	3
	General Electives	28

†† Must complete 7400:265, 275 and 5200:360, 370 and 310 before taking 5850:295. See coordinator the previous semester.

\* See department for list of humanities options.

‡ Must complete required courses before taking 5850:295. See coordinator the previous semester.

**Library Technician (Inactive)**

		Credits
2200:100	Introduction to Library Technology	3
2200:201	Processing, Cataloging and Classifying Materials	3
2200:202	Organizing and Operating Library Media Centers	3
2200:203	Materials Selection	2
2200:204	Reference Procedures	3
2200:205	Information Retrieval Systems in Library Technology	3
2540:140	Keyboarding for Non-Majors	2
2540:141	PC Word Processing for Non-Majors	2
3750:100	Introduction to Psychology	3
	General Electives	16

**Note:** Certain courses in the Library Technician option must be taken in sequence. Child Development must be taken the first semester to complete the degree in two years.

**2210: American Sign Language Interpreting and Transliterating Technology**

The program provides intensive interpreter preparation training for students who wish to become professional interpreters or "communication facilitators" between hearing and deaf/hearing impaired consumers.

2020:121	English	4
2210:111	Intro. to Sign, Deafness & Interpreting Services	3
2210:112	American Sign Language I	4
2210:114	American Sign Language Semantics & Structure I	3
2210:122	American Sign Language II	4
2210:124	American Sign Language Semantics & Structure II	3
2210:126	Advanced Fingerspelling & Numbers	2
2210:128	The Profession of Interpreting	3
2210:232	American Sign Language III	4
2210:234	Translating/Interpreting Skills in English and ASL	4
2210:236	Consecutive Interpreting	4
2210:238	American Deaf Culture	3
3750:100	Introduction to Psychology	
	or	
2040:240	Human Relations	3
2210:242	American Sign Language IV	4
2210:244	Simultaneous Interpreting	4
2210:246	The Interpreter in an Educational Setting	3
2210:248	Interpreting Practicum I	2
2040:242	American Urban Society	3
2420:170	Business Math	3
	or	
2030:130	Introduction to Technical Mathematics	
2210:252	Interpreting Practicum II	3
2210:254	Applied Ethics in Interpreting	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

**2220: Criminal Justice Technology**

This program provides the student with a professional perspective of criminal justice through skills and technical functions and offers courses designed to develop a better understanding of our rapidly changing society.

2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	3
2040:242	American Urban Society	3
2220:100	Introduction to Criminal Justice	3
2220:102	Criminal Law for Police	3
2220:104	Evidence and Criminal Legal Process	3
2220:106	Juvenile Justice Process	3
2220:110	Social Values and Criminal Justice Process	3
2220:200	Criminal Justice Theory and Practice	3
2220:240	Vice and Organized Crime	3
2220:250	Criminal Case Management	6
2220:296	Current Topics in Criminal Justice	3
2840:100	Basic Chemistry	3
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education **	1
7600:106	Effective Oral Communication	3
	Technical Electives	6

**Options in Criminal Justice**

**Criminal Justice Advanced Officer Training**

		Credits
2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	3
2040:242	American Urban Society	3
2220:104	Evidence and Criminal Legal Process	3
2220:200	Criminal Justice Theory and Practice	3
2220:212	Traffic Accident Investigator	4
2220:222	Interview and Interrogation	3
2220:242	Organized Crime/Vice Crime	3
2220:252	Advanced Criminal Case Management	4
2220:262	Police Administration	3
2220:290	Special Technical Topics in Criminal Justice	6
2230:250	Hazardous Materials	4
2840:100	Basic Chemistry	3
3850:100	Introduction to Sociology	4
3850:330	Criminology	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

**Security Administration**

2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	3
2040:242	American Urban Society	3
2220:101	Introduction to Security	4
2220:102	Criminal Law for Police	3
2220:104	Evidence and Criminal Legal Procedure	3
2220:240	Vice and Organized Crime	3
2220:250	Criminal Case Management	6
2220:296	Current Topics in Criminal Justice	3
2230:204	Fire Hazards Recognition	3
2230:250	Hazardous Materials	4
2420:104	Introduction to Business	3
2440:120	Computer and Software Fundamentals	2
2840:100	Basic Chemistry	3
2882:141	Safety Procedures	3
5540:xxx	Physical Education **	1
7600:106	Effective Oral Communication	3
	Technical Electives	3

**Social Work Emphasis**

2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	3
2040:242	American Urban Society	3
2220:100	Introduction to Criminal Justice	3
2220:102	Criminal Law for Police	3
2220:104	Evidence and Criminal Legal Process	3
2220:106	Juvenile Justice Process	3
2220:110	Social Values and Criminal Justice Process	3
2220:200	Criminal Justice Theory and Practice	3
2220:296	Current Topics in Criminal Justice	3
2840:100	Basic Chemistry	3
3100:103	Natural Science: Biology/Lab	4
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
7750:270	Poverty in the United States	3
7750:276	Introduction to Social Welfare	4
7750:427	Human Behavior in Social Environment	3
	Technical Electives	2

A student with a particular interest in corrections may vary the program of study by making the following substitutions: 3850:330 Criminology, three credits; 3850:432 Probation and Parole, three credits; or 2260:278 Techniques of Community Work, four credits; and 3850:431 Corrections, three credits, for courses: 2220:250 Criminal Case Management, six credits; and 2220:240 Dynamics of Vice Crime and Substance Abuse, three credits. Students must complete electives to equal the 64-credit program requirement.

\*\* The following are recommended: 139, Life Saving; 155, Swimming; 173, Self-Defense; or 174, Karate.

\*\* The following are recommended: 139, Life Saving; 155, Swimming; 173, Self-Defense; or 174, Karate.

**2230: Fire Protection Technology**

This program prepares persons to serve governmental, industrial and other fire protection agencies in fire fighting and prevention, property protection and in handling emergency situations.

		Credits
2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	3
2040:242	American Urban Society	3
2230:100	Introduction to Fire Protection	3
2230:102	Fire Safety in Building Design and Construction	3
2230:104	Fire Investigation Methods	4
2230:204	Fire Hazards Recognition	3
2230:202	Fire Suppression and Emergency Response Methods	4
2230:205	Fire Detection and Suppression Systems I	3
2230:206	Fire Detection and Suppression Systems II	3
2230:250	Hazardous Materials	4
2230:254	Fire Codes and Standards	3
2230:257	Fire Protection for Business and Industry	3
2230:280	Fire Service Administration	4
2840:100	Basic Chemistry	3
7600:105	Introduction to Public Speaking	3
2230:xxx	Technical Electives	4

**2260: Community Services Technology**

This program prepares individuals for employment supportive of social work of other professional community service personnel providing social services for individuals, families, groups and communities.

2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:241	Technology and Human Values	2
	or	
2040:244	Death and Dying	2
2040:242	American Urban Society	3
2040:254	The Black American	2
2230:280	Fire Service Administration	4
2260:100	Introduction to Community Services	3
2260:150	Introduction to Gerontological Services	3
2260:240	Chemical Dependency **	3
2260:260	Alcohol Use and Abuse	3
2260:277	Case Management in Community Services	3
2260:278	Techniques of Community Work	4
2260:279	Technical Experience: Community and Social Services	5
2440:120	Computer and Software Fundamentals	2
2540:141	WordPerfect, Beginning	2
3850:100	Introduction to Sociology	4
7600:106	Effective Oral Communication	3
7750:276	Introduction to Social Welfare	4
	Technical Electives	8

**Options****Alcohol Services**

2260:261	Alcoholism Treatment	3
2260:262	Basic Helping Skills in Alcohol Problems	4
2260:263	Group Principles in Alcoholism	4
2260:	Alcohol Services Elective	1-3

**Gerontology**

1850:450	Interdisciplinary Seminar in Gerontology	2
1850:486	Retirement Specialist	2
2040:244	Death and Dying	2
7400:390	Family Relationships in Middle and Later Years	3
	Gerontology Electives	4

**Social Services Emphasis †**

2020:121	English	4
3300:112	English Composition II	3
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2040:254	The Black American	2
2260:100	Introduction to Community Services	3
2260:150	Introduction to Gerontological Services	3

2260:260	Alcohol Use and Abuse	3
2260:277	Case Management in Community Services	3
2260:278	Techniques of Community Work	4
2260:279	Technical Experience: Community and Social Service	5
3100:103	Natural Science: Biology	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
7750:270	Poverty in the United States	3
7750:276	Introduction to Social Welfare	4
7750:427	Human Behavior and Social Environment I	3
	<b>Volunteer Programming</b>	
2260:280	Fundamentals of Volunteer Management	3
2260:281	Recruitment and Interviewing of Volunteers	3
	Technical Electives (suggested):	
2200:245	Infant/Toddler Day-Care Programs	3
2220:106	Juvenile Justice Process	3
2260:230	Community-Based Residential Services	3
2260:240	Chemical Dependency	3
2260:241	Chemical Dependency II	3
2260:290	Special Topics in Community Services Technology	2-4
2540:140	Keyboarding for Non-Majors	3

**2290: Legal Assisting Technology**

2020:121	English	4
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:240	Human Relations	3
2220:104	Evidence and Criminal Legal Process	3
2290:101	Introduction to Legal Assisting	3
2290:104	Basic Legal Research and Writing	3
2290:106	Business Associations	3
2290:108	Real Estate Transactions	3
2290:110	Tort Law	3
2290:112	Family Law	3
2290:118	Probate Administration	4
2290:204	Advanced Legal Research	3
2290:214	Civil Procedure	3
2290:216	Debtor-Creditor Relations	3
2290:218	Advanced Probate Administration	3
2290:220	Legal Assisting Internship	4
2420:211	Basic Accounting I	3
2440:120	Computer and Software Fundamentals	2
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	General Electives	3
	Technical Electives	3

**Recommended General Electives (choose one)**

2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3

**Recommended Technical Electives (choose one)**

2220:102	Criminal Law for Police	3
2220:106	Juvenile Justice Process	3

† For students who wish to pursue a baccalaureate degree in social work in a "2+2" arrangement. Prerequisites include 7750:427 Human Behavior in Social Work Environment (3) and 3100:103 Natural Sciences: Biology/Lab (4).

# Wayne College

Tyrone M. Turning, Ed.D., *Dean*  
 Raymond R. McBeth, Ph.D., *Assistant Dean and Director of Academic Affairs*  
 Helene S. Thall, M.S., *Assistant Dean and Director of Student Services*

## HISTORY AND MISSION

To meet the needs of the citizens of Wayne, Holmes and Medina counties, The University of Akron Wayne College opened its doors in 1972. Wayne College offers eight technical programs and five certificate programs, as well as the first two years of most baccalaureate programs. The following degrees are available from The University of Akron Wayne College: Associate of Arts; Associate of Science; Associate of Technical Studies; Associate of Applied Business in Business Management Technology and in Office Administration; Associate of Applied Science in Environmental Health and Safety Technology, Microprocessor Service Technology and in Social Services Technology.

## ADMISSIONS

Admission materials can be obtained by writing the Admissions Office at Wayne College or the Office of Admissions of The University of Akron, or by calling 683-2010 in the Orrville/Wooster area, or 1-800-221-8308 in Ohio.

The student enrolled at Wayne College may also take courses at the main campus of The University of Akron while attending Wayne College. Likewise, a student enrolled on the main campus may take courses at Wayne College. The University of Akron-Wayne College is accredited at the associate degree level by the North Central Association of Colleges and Schools.

## WAYNE COLLEGE PROGRAMS

The following associate degree programs are available at Wayne College. The structure of these programs may differ from similar programs within the Community and Technical College of The University of Akron. All required courses for these programs are available at the college for students attending day or evening classes. A diploma issued as a result of the completion of one of these programs carries The University of Akron-Wayne College designation. In some instances, specific course sequencing is necessary, especially to the student attending full time, to accommodate completion of the program in two years. Please consult an adviser at Wayne College for further details.

### Associate of Technical Studies

The Associate of Technical Studies (ATS) provides an integrated program of study for those students whose educational objectives and interests cannot be met through the college's formal associate degree programs. The Associate of Technical Studies permits students to combine various courses from two or more of the college's existing programs with other University credits, with credits earned at other postsecondary institutions, and/or with training received through other educational enterprises.

The Associate of Technical Studies is administered through the Office of the Dean and coordinated by the Assistant Dean and Director of Student Affairs. Interested students must complete a formal Associate of Technical Studies application. Upon application, the Assistant Dean and Director of Student Affairs makes an initial assessment of any transfer work and assists the applicant in selecting relevant areas of study. The application is then forwarded for review by the faculty most closely associated with the proposed area of study. Upon faculty acceptance, the application is submitted to the Associate of Technical Studies Committee who, upon approval, forwards the application to the dean of Wayne College for final approval.

The following are the graduation requirements for the Associate of Technical Studies:

- Completion of an Associate of Technical Studies application specifying a coherent combination of technical courses selectively drawn from two but no more than three major areas of study and reflecting a reasonable array of courses within each area of study.
- Approval of the Associate of Technical Studies application by the Assistant Dean and Director of Student Affairs, relevant faculty, the Associate of

Technical Studies committee, and the dean of Wayne College.

- Degree application of only that transfer coursework completed with a "C" (2.0) grade or better.
- Completion of at least 14 credits of "general education" courses and 14 credits of "basic" courses, as required by the Ohio Board of Regents.
- Completion of at least one-half of the technical credits at The University of Akron and/or Wayne College, equally divided among the selected areas of study.
- Completion of a minimum of 64 credits with a grade point average of 2.0
- Completion of all other University graduation requirements.

### 2020: Associate of Arts/Associate of Science

The Associate of Arts and Associate of Science degree (sometimes referred to as the university parallel, transfer, or general studies) programs are intended to produce an intelligent individual who understands effective social behavior and appreciates scientific fact and human values. The programs are designed to impart specific skills essential to effective adult functioning. These include the abilities to write and speak effectively, to calculate, and to think constructively and critically. The programs also provide a broad foundation of general knowledge about the physical and social universe as preparation for advanced baccalaureate study.

Most recipients of the Associate of Arts and the Associate of Science degrees transfer to bachelor's degree-granting institutions to complete their intellectual, professional, and cultural goals. The Associate of Arts and the Associate of Science degrees meet the general requirements for most baccalaureate degree programs at The University of Akron and other college and universities throughout the country.

#### Arts Option

		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3400:210	Humanities in the Western Tradition <sup>1</sup>	4
5540:—	Physical Education	1
7600:106	Effective Oral Communication	3
	Area Studies/Cultural Diversity Requirement <sup>2</sup>	4
	Humanities Requirement <sup>1</sup>	6
	Mathematics Requirement <sup>3</sup>	3
	Natural Sciences Requirement <sup>4</sup>	8
	Social Sciences Requirement <sup>5</sup>	6
	Electives <sup>6</sup>	22
		64

#### Science Option

3300:111	English Composition I	4
3300:112	English Composition II	3
3400:210	Humanities in the Western Tradition <sup>1</sup>	4
5540:—	Physical Education	1
7600:106	Effective Oral Communication	3
	Area Studies/Cultural Diversity Requirement <sup>2</sup>	4
	Humanities Requirement <sup>1</sup>	6
	Mathematics Requirement <sup>3</sup>	3
	Natural Sciences Requirement <sup>4</sup>	8
	Social Sciences Requirement <sup>5</sup>	6
	Electives <sup>6</sup>	22
		64

<sup>1</sup> Students must have completed a minimum of 32 semester credits and have completed 3300:112 English Composition II before enrolling for this course. An additional six credits of humanities must also be completed. Please consult an adviser for specific options.

<sup>2</sup> Students must complete two courses totaling four credits from the area studies/cultural diversity options. The engineering student is required to take only one course. Please consult an adviser for specific options.

<sup>3</sup> The mathematics requirement varies by department. Please consult an adviser for specific requirements.

<sup>4</sup> A minimum of eight credits of natural science are required. One course must have a laboratory component. However, departmental requirements may vary. Please consult an adviser for specific information.

<sup>5</sup> Students may satisfy the General Education Requirement in the social sciences area by completing two courses totaling six credits from two different sets in the social science group. Please consult an adviser for specific information.

<sup>6</sup> In the arts program, a student is free to choose any electives, but they must be in some logical sequence. They should lead to some upper-college degree program, i.e., arts and sciences, education, or fine and applied arts.

<sup>7</sup> In the science program, a student is free to choose any electives. However, at least two-thirds of the credits must be in the natural sciences; mathematics, statistics or computer science; engineering; business administration; or nursing department; and should lead to some upper-college degree objective.

**2260: Social Services Technology**

This program prepares the individual for employment in support of social workers or other professional human services personnel. It includes courses in social work, sociology, psychology and various aspects of community services.

**General Options**

	<i>Credits</i>
2040:240 Human Relations	3
2040:260 The Arts and Human Experience	3
2260:150 Introduction to Gerontological Services	3
2260:260 Alcohol Use and Abuse	3
2260:278 Techniques of Community Work	4
2260:285 Social Services Practicum	4
2260:288 Techniques of Community Work II	4
2260:294 Social Services Practicum Seminar	2
3300:111 English Composition I	4
3300:112 English Composition II	3
3750:100 Introduction to Psychology	3
3750:230 Developmental Psychology	4
3850:100 Introduction to Sociology	4
3850:104 Social Problems	3
5540:xxx Physical Education	1
7400:201 Courtship, Marriage and Family Relations	3
7600:106 Effective Oral Communication	3
7750:270 Poverty in the U.S.	3
7750:276 Introduction to Social Welfare	4
Electives	-3
	64

**2+2 Option with Bachelor of Arts/Social Work degree**

3300:111 English Composition I	4
3300:112 English Composition II	3
3100:103 Natural Science-Biology	4
2260:150 Introduction to Gerontological Services	3
2260:260 Alcohol Use and Abuse	3
2260:278 Techniques of Community Work	4
2260:285 Social Services Practicum	2-4
2260:288 Techniques of Community Work II	4
2260:294 Social Services Practicum Seminar	2
3700:100 Government and Politics in the U.S.	4
3750:100 Introduction to Psychology	3
3850:100 Introduction to Sociology	4
5540:xxx Physical Education	1
7600:106 Effective Oral Communication	3
7750:270 Poverty in the U.S.	3
7750:276 Introduction to Social Welfare	4
Economics requirement	3
Human Development requirement	3
Natural Science requirement	4
Social Services Elective(s)	1-3
	64

**2420: Business Management Technology**

The Accounting Option provides paraprofessional training for a variety of accounting positions. Graduates will be prepared for immediate employment in the areas of financial accounting, sales, procurement, credit and collections, business research, data compilation and reporting. The Data Management Option prepares graduates to use personal computers effectively in a business environment. Graduates will be prepared to fill entry-level positions where microcomputers are used in office management, computer sales, or local area network management. The General Option provides training in varied business activities in preparation for a first-level management position in business, industry, government and non-profit organizations or as a self-employed manager. The Sales and Services Option equips graduates for entry-level sales or service support positions, with special emphases in banking, financial services, general sales, insurance, and real estate.

**Accounting Option**

2040:247 Survey of Basic Economics	3
2040:251 Human Behavior at Work	3
2040:260 The Arts and Human Experience	3
2420:103 The Role of Supervision in Management	3
2420:104 Introduction to Business	3
2420:171 Business Calculations	3
2420:211 Basic Accounting I	3
2420:212 Basic Accounting II	3
2420:213 Basic Accounting III	3
2420:214 Essentials of Intermediate Accounting	3
2420:216 Survey of Cost Accounting	3

2420:217 Survey of Taxation	4
2420:218 Automated Bookkeeping	2
2420:243 Survey in Finance	3
2420:280 Essentials of Law	3
2440:120 Computer and Software Fundamentals	2
2440:125 Lotus 1-2-3	2
2540:119 Business English	3
2540:263 Business Communications	3
2540:289 Career Development for Business Professionals	3
3300:111 English Composition I	4
5540:xxx Physical Education	1
7600:106 Effective Oral Communication	3
Elective	1
	67

**Data Management Option - Software Emphasis**

2030:161 Mathematics for Modern Technology	4
2040:240 Human Relations	3
2040:247 Survey of Basic Economics	3
2040:260 The Arts and Human Experience	3
2420:101 Elements of Distribution	3
2420:103 The Role of Supervision in Management	3
2420:104 Introduction to Business	3
2420:202 Personnel Practices	3
2420:211 Basic Accounting I	3
2420:212 Basic Accounting II	3
2420:218 Automated Bookkeeping	2
2420:243 Survey in Finance	3
2420:280 Essentials of Law	3
2440:120 Computer and Software Fundamentals	2
2440:125 Lotus 1-2-3	2
2440:130 BASIC Programming for Business	3
2440:151 PC DOS Fundamentals	1
2440:245 Introduction to dBase III+/IV	3
2440:255 Introduction to Network Administration	3
2440:267 4GL for Micros: dBase III+	3
2540:119 Business English	3
2540:263 Business Communications	3
3300:111 English Composition I	4
5540:xxx Physical Education	1
7600:106 Effective Oral Communication	3
	70

**Data Management Option - Networking Emphasis**

2030:161 Mathematics for Modern Technology	4
2040:240 Human Relations	3
2040:247 Survey of Basic Economics	3
2040:260 The Arts and Human Experience	3
2420:101 Elements of Distribution	3
2420:103 The Role of Supervision in Management	3
2420:104 Introduction to Business	3
2420:202 Personnel Practices	3
2420:211 Basic Accounting I	3
2420:212 Basic Accounting II	3
2420:218 Automated Bookkeeping	2
2420:243 Survey in Finance	3
2420:280 Essentials of Law	3
2440:120 Computer and Software Fundamentals	2
2440:151 PC DOS Fundamentals	1
2440:270 Network Management I	4
2440:272 Network Technologies	2
2440:274 Network Service and Support	4
2440:276 Network Management II	4
2540:119 Business English	3
2540:263 Business Communications	3
3300:111 English Composition I	4
5540:xxx Physical Education	1
7600:106 Effective Oral Communication	3
	70

**General Business Option**

2040:240 Human Relations	3
2040:247 Survey of Basic Economics	3
2040:251 Human Behavior at Work	3
2040:260 The Arts and Human Experience	3
2420:101 Elements of Distribution	3
2420:103 The Role of Supervision in Management	3
2420:104 Introduction to Business	3
2420:171 Business Calculations	3
2420:202 Personnel Practices	3
2420:211 Basic Accounting I	3
2420:212 Basic Accounting II	3

		Credits
2420:218	Automated Bookkeeping	2
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2540:119	Business English	3
2540:140	Keyboarding for Nonmajors	2
2540:263	Business Communications	3
2880:232	Labor-Management Relations	3
3300:111	English Composition I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Electives	2
		<u>64</u>

### Sales and Services Option

2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2040:260	The Arts and Human Experience	3
2420:101	Elements of Distribution	3
2420:103	The Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:171	Business Calculations	3
2420:211	Basic Accounting I	3
2420:218	Automated Bookkeeping	2
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2520:210	Consumer Service Fundamentals	2
2520:212	Principles of Sales	3
2540:119	Business English	3
2540:263	Business Communications	3
3300:111	English Composition I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Emphasis Courses	15
		<u>68</u>

### Bank Teller/Supervisor emphasis

2420:113	Introduction to Banking	2
2420:202	Personnel Practices	3
2420:212	Basic Accounting II	3
2420:233	Installment Credit	2
2420:253	Elements of Bank Management	2
2440:125	Lotus 1-2-3 and	2
2440:151	PC-DOS Fundamentals or	1
2440:245	Introduction to dBASE III+/IV	3

### Financial Services emphasis

2420:125	Personal Financial Counseling	3
2420:212	Basic Accounting II	3
2420:217	Survey of Taxation	4
2420:234	Survey of Investment Products and Services	3
2440:125	Lotus 1-2-3	2

### General Sales emphasis

2520:103	Principles of Advertising	3
2520:106	Visual Promotion	3
2520:202	Retailing Fundamentals or	3
2520:203	Fundamentals of Industrial Distribution	3
2520:219	Sales Projects	2
3250:248	Consumer Economics	3
	Elective	1

### Insurance Client Services emphasis

2420:206	Survey of Insurance Products and Services I	3
2420:207	Survey of Insurance Products and Services II	3
2440:245	Introduction to dBASE III+/IV	3
2540:121	Introduction to Office Procedures	3
2540:289	Career Development for Business Professionals	3

### Real Estate emphasis

2420:202	Personnel Practices	3
2430:105	Real Estate Principles	2
2430:185	Real Estate Law	2

2430:245	Real Estate Finance	2
2430:255	Valuation of Residential Property	2
2440:125	Lotus 1-2-3 and	2
2440:151	PC-DOS Fundamentals or	1
2440:245	Introduction to dBASE III+/IV	3

### 2540: Office Administration

The following programs provide thorough training in keyboarding, word processing, communications—written, oral and graphic—as well as training in current computer software programs. The Office Administration graduate will be well prepared for a variety of responsible positions as a member of an office management team in many business settings. The specialty options are Executive Assistant, Medical Secretary, and Legal Secretary.

### Executive Assistant Option

2040:240	Human Relations	3
2040:260	The Arts and Human Experience	3
2420:103	Role of Supervision in Management	3
2420:171	Business Calculations	3
2420:211	Basic Accounting I	3
2420:218	Automated Bookkeeping	2
2440:125	Lotus 1-2-3	2
2440:151	PC-DOS Fundamentals	1
2440:155	Introduction to Windows	1
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:150	Beginning Keyboarding	3
2540:151	Intermediate Keyboarding	3
2540:241	Information Management	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:271	Desktop Publishing	3
2540:273	Computer-Based Graphics Presentation	3
2540:263	Business Communications	3
2540:281	Machine Transcription	3
2540:286	Microsoft Word for Windows	3
2540:289	Career Development for Business Professionals	3
3300:111	English Composition I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Elective	1
		<u>65</u>

### Legal Secretary Option

2040:240	Human Relations	3
2040:260	The Arts and Human Experience	3
2420:171	Business Calculations	3
2420:211	Basic Accounting I	3
2420:218	Automated Bookkeeping	2
2420:280	Essentials of Law	3
2440:125	Lotus 1-2-3	2
2440:151	PC-DOS Fundamentals	1
2440:155	Introduction to Windows	1
2540:119	Business English	3
2540:150	Beginning Keyboarding	3
2540:151	Intermediate Keyboarding	3
2540:241	Information Management	3
2540:255	Legal Office Procedures I	3
2540:263	Business Communications	3
2540:273	Computer-Based Graphics Presentation	3
2540:279	Legal Office Procedures II	4
2540:281	Machine Transcription	3
2540:286	Microsoft Word for Windows	3
2540:289	Career Development for Business Professionals	3
3300:111	English Composition I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Elective	1
		<u>64</u>

### Medical Secretary Option

2040:240	Human Relations	3
2040:260	The Arts and Human Experience	3
2420:171	Business Calculations	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:218	Automated Bookkeeping	2
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3

		Credits
2540:150	Beginning Keyboarding	3
2540:151	Intermediate Keyboarding	3
2540:243	Internship	2
2540:256	Medical Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:282	Medical Machine Transcription	3
2540:284	Office Nursing Techniques	2
2540:286	Microsoft Word for Windows	3
2740:120	Medical Terminology	3
2740:241	Medical Records	3
2780:106	Anatomy and Physiology for Allied Health I *	3
2780:107	Anatomy and Physiology for Allied Health II *	3
3300:111	English Composition I	4
5540:xxx	Physical Education	1
5550:211	First Aid	2
		64

### 2600: Microprocessor Service Technology

This program is designed to prepare students to carry out preventive maintenance and repairs on microprocessor-based systems in varied manufacturing and service organizations. Graduates will be equipped to maintain a microprocessor-based system; repair it by performing appropriate software diagnostics; isolate and correct hardware casualties; and troubleshoot the interface between the system and ancillary and peripheral equipment.

Students completing this program may assume job titles in industry such as: computer repair technician; electrical/electronic maintenance technician; field service technician; industrial process control technician; or instrumentation technician.

2020:222	Technical Report Writing	3
2030:152	Elements of Math II	2
2030:153	Elements of Math III	2
2040:251	Human Behavior at Work	3
2040:260	The Arts and Human Experience	3
2440:151	PC DOS Fundamentals	1
2440:269	C Programming and Unix	2
2520:210	Consumer Service Fundamentals	2
2600:100	Basic Electronics for Technicians	5
2600:125	Digital Electronics for Technicians	4
2600:155	Microprocessor Assembly Language Programming	2
2600:160	Personal Computer Repair	4
2600:180	Microprocessor Service Practicum	2
2600:185	Microprocessor Service Practicum Seminar	1
2600:190	Microprocessor Systems Architecture	3
2600:210	Industrial Electronics for Technicians	4
2600:230	Microprocessor and Digital Technology	4
2600:275	Digital Data Communications	5
2820:161	Technical Physics: Mechanics I	2
2820:162	Technical Physics: Mechanics II	2
2820:164	Technical Physics: Heat and Light	2
3300:111	English Composition I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communications	3
	Approved Basic or Technical Elective	2
		67

### 2800: Environmental Health and Safety Technology

This program is to prepare students for employment in business, industry, and government as environmental health and safety technicians. The environmental health and safety technician carries out organizational plans intended to ensure a healthy and safe work and community environment. Specifically, the technician monitors, records, and reports on the handling, processing, and disposal of materials and products in compliance with local, state, federal, and organizational standards and trains and advises supervisory and operational personnel in the provision of a safe and healthy environment.

Graduates of the program will possess knowledge and laboratory skills sufficient to enable them to understand, communicate, and effectively address most environmental health and safety issues and will understand the legal and regulatory system within which modern industry operates. Environmental consulting firms,

manufacturers, medical facilities, regulatory agencies, and waste treatment plants can hire graduates in entry-level positions to monitor and control wastes and to assist them in complying with local, state, and federal regulations and regulatory agencies.

		Credits
2020:222	Technical Report Writing	3
2030:152	Elements of Math II	2
2040:251	Human Behavior at Work	3
2230:250	Hazardous Materials	4
2230:257	Fire Protection for Business and Industry	3
2420:104	Introduction to Business	3
2440:120	Computer and Software Fundamentals	2
2540:241	Information Management	3
2800:200	Physics for Environmental Technicians	3
2800:210	Occupational Safety and Risk	3
2800:220	Environmental Law and Regulations	3
2800:230	Water and Atmospheric Pollution	3
2800:232	Environmental Sampling Laboratory	2
3100:104	Introduction to Ecology Laboratory	1
3100:105	Introduction to Ecology	2
3100:130	Principles of Microbiology	3
3150:129	Introduction to General, Organic and Biochemistry I	4
3150:130	Introduction to General, Organic and Biochemistry II	4
3300:111	English Composition I	4
3370:200	Environmental Geology	3
3470:260	Basic Statistics	3
3600:120	Introduction to Ethics	3
5550:211	First Aid and CPR	2
7600:106	Effective Oral Communications	3
		69

## CERTIFICATE PROGRAMS

Certificate programs are designed to provide students with specialized job training in two semesters of full-time study. The programs offer courses from the college's associate degrees. These courses can later be applied toward the Associate of Applied Business in Office Administration or Business Management Technology degrees, the Associate of Applied Science in Social Services Technology degree, or the Associate of Applied Science in Microprocessor Service Technology.

### Data Management Certificate

This certificate will provide collegiate credit for those who find themselves in supervisory or managerial positions without formal training or education and who wish to obtain specialized training in data management.

		Credits
2040:240	Human Relations	3
2420:103	The Role of Supervision in Management	3
2420:104	Introduction to Business	3
2420:211	Basic Accounting I	3
2420:218	Automated Bookkeeping	2
2440:120	Computer and Software Fundamentals	2
2440:125	Lotus 1-2-3	2
2440:130	BASIC Programming for Business	3
2440:245	Introduction to dBase III+/IV	3
2440:255	Introduction to Network Administration	3
2440:267	4GL for Micros: dBase III+	3
2540:119	Business English	3
2540:263	Business Communications	3
		36

### Gerontological Social Services Certificate

Jobs in gerontological social services are expected to increase significantly in coming years because of rapidly growing numbers of older persons in our society.

This one-year certificate program is designed to respond to the need for individuals with specialized knowledge and skills for employment in nursing homes, retirement communities, senior centers, nutrition sites and similar programs.

2260:117	Exploratory Experience in a Social Service Agency	1
2260:150	Introduction to Gerontological Services	3
2260:251	Community Services for Senior Citizens	3
2260:278	Techniques of Community Work	4
2260:285	Social Services Practicum	2
2260:288	Techniques of Community Work II	4
2260:294	Social Services Practicum Seminar	1

\* Students who begin this sequence on the University's main campus must complete it at the main campus. Students who begin the sequence at Wayne College must complete it at Wayne College.

3100:103	Natural Science: Biology	Credits	4
3100:108	Introduction to Biological Aging		3
3300:111	English Composition I		4
7750:276	Introduction to Social Welfare		4
			<u>33</u>

### Medical Transcription Certificate

There is substantial demand for skilled medical transcriptionists. This certificate will prepare individuals for entry-level positions in physicians' offices, hospitals, clinics, and insurance companies. The emphasis will be on keyboarding, medical terminology, and communication skills.

2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:151	Intermediate Keyboarding	3
2540:256	Medical Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:282	Medical Machine Transcription	3
2540:286	Microsoft Word for Windows	3
2740:120	Medical Terminology	3
2740:241	Medical Records	3
2780:106	Anatomy and Physiology for Allied Health I *	3
2780:107	Anatomy and Physiology for Allied Health II *	3
		<u>33</u>

### Personal Computer Repair Certificate

This certificate is designed to prepare individuals to maintain and repair personal computers in enterprises where they are sold or where they are used in day-to-day operations.

2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2440:151	PC-DOS Fundamentals	1
2520:210	Consumer Service Fundamentals	2
2600:100	Basic Electronics for Technicians	5
2600:155	Microprocessor Assembly Language Programming	2
2600:160	Personal Computer Repair	4
2600:180	Microprocessor Service Practicum	2
2600:185	Microprocessor Service Practicum Seminar	1
2600:190	Microprocessor Systems Architecture	3
3300:111	English Composition I	4
7600:106	Effective Oral Communication	3
		<u>31</u>

### Word Processing Certificate

This certificate prepares a student for an entry-level job in word processing. Applicants for this program must have one year of formal typewriting instruction or two years of work experience as a typist. Recipients of this certificate are prepared to fill positions in secretarial or clerical areas.

2420:171	Business Calculations	3
2420:211	Basic Accounting I	3
2420:218	Automated Bookkeeping	2
2440:120	Computer and Software Fundamentals	2
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:151	Intermediate Keyboarding	3
2540:241	Information Management	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:281	Machine Transcription	3
2540:286	Microsoft Word for Windows	3
		<u>34</u>

## GENERAL EDUCATION/ TRANSFER PROGRAM

Wayne College offers the first two years of general baccalaureate education for transfer to the Akron campus of The University of Akron or to any other college or university. General courses in communications, the humanities, cultural diversity, social sciences, mathematics and natural sciences are required, along with basic courses in the student's chosen field. For undecided students, this is the time to take courses from several areas in order to select a field most to their liking.

The following outlines represent the first two years of study for various bachelor's degree programs of The University of Akron. Some courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements. These programs are marked with an asterisk (\*). Finally, completion of the courses listed may also qualify a student to receive either the Associate of Arts or the Associate of Science degree. Please consult a Wayne College adviser for further details.

### 3100: Biology

First Year		Credits
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Lab	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:149	Precalculus Mathematics	4
		<u>32</u>
Second Year		
3100:211	General Genetics	3
3100:217	General Ecology	3
3100:316	Evolutionary Biology	3
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
5540:xxx	Physical Education	1
	Beginning Foreign Language	8
	Social Science Requirement	6
		<u>34</u>

### 3120: Medical Technology\*

First Year		Credits
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Lab	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:149	Precalculus Mathematics	4
		<u>32</u>
Second Year		
3100:208	Human Anatomy and Physiology	4
3100:209	Human Anatomy and Physiology	4
3100:211	General Genetics	3
3100:212	General Genetics Laboratory (optional)	1
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Social Science Requirement	6
		<u>32</u>

\* Students who begin this sequence on the University's main campus must complete it at the main campus. Students who begin the sequence at Wayne College must complete it at Wayne College.

\* Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

**3150: Chemistry**

First Year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Lab	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:149	Precalculus Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
5540:xxx	Physical Education	1
	Foreign Language Requirement or Social Science Requirement	8
		<u>6</u>
		31-33
<b>Second Year</b>		
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
7600:106	Effective Oral Communication	3
	Foreign Language Requirement or Social Science Requirement	6-8
		<u>6</u>
		35-37

**3250: Economics**

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:215	Concepts of Calculus I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Natural Science Requirement	8
		<u>8</u>
		35
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Social Science Requirement	3
	Electives	<u>3</u>
		32

**3250:01 Labor Economics\***

First Year		Credits
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:215	Concepts of Calculus I	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Electives	<u>7</u>
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Natural Science Requirement	8
	Social Science Requirement	3
	Electives	<u>7</u>
		32

**3300: English\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Social Science Requirement	6
	Electives	<u>4</u>
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	8
	Electives	<u>4</u>
		32

**3350: Geography and Planning\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3350:100	Introduction to Geography	3
3350:350	Geography of the United States and Canada	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Social Science Requirement	3
	Electives	<u>4</u>
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Mathematics Requirement	3
	Natural Science Requirement	8
	Electives	<u>1</u>
		32

**3370: Geology (and Geophysics)\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II (optional for B.A.)	3
3150:154	Qualitative Analysis (optional for B.A. and B.S.)	2
3370:101	Introduction to Physical Geology	4
3450:149	Precalculus Mathematics	4
3450:221	Analytic Geometry-Calculus I (for B.S.)	4
5540:xxx	Physical Education	1
	Social Science Requirement	6
	Electives (for B.A.)	<u>4</u>
		35
<b>Second Year</b>		
3100:111	Principles of Biology I (for B.A.) or	4
3450:222	Analytic Geometry-Calculus II (for B.S.)	4
3370:102	Introduction to Historical Geology	4
3400:210	Humanities in the Western Tradition I**	4
7600:106	Effective Oral Communication	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement**	6
	Beginning Foreign Language	<u>8</u>
		33

**3400: History**

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3400:250	U.S. History to 1877	4
3400:251	U.S. History since 1877	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3

\* Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

\*\* Geophysics majors must take 3650:291 and 292, Elementary Classical Physics I and II during the second year instead of the humanities credits.

	<b>Credits</b>
Beginning Foreign Language	8
Mathematics Requirement	3
Social Science Requirement	<u>3</u>
	33

**Second Year**

3400:210	Humanities in the Western Tradition I	4
3400:225	Europe: Renaissance through the 18th Century	4
3400:226	Europe: 19th and 20th Centuries	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	<u>8</u>
		34

**3450: Mathematics (and Applied Mathematics)\***

(see 3470: Statistics below)

**3470: Statistics****First Year**

3300:111	English Composition I	4
3300:112	English Composition II	3
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Natural Science Requirements	8
	Social Science Requirements	6
	or	
	Beginning Foreign Language	<u>8</u>
		33-35

**Second Year**

Students attending part time, or who are ineligible to take 3450:221 during the first year can take additional requirements at Wayne College during the second year. Students attending full time should go to the Akron campus in the second year to take required mathematics prerequisite courses. Please consult a Wayne College adviser.

**3460: Computer Science****Options****Business****First Year**

3300:111	English Composition I	4
3300:112	English Composition II	3
3450:208	Discrete Mathematics	4
3450:215	Concepts of Calculus I	4
3460:209	Introduction to Computer Science	4
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Natural Science Requirement	4
	Social Science Requirement	<u>3</u>
		37

**Second Year**

3250:244	Introduction to Economic Analysis	3
3400:210	Humanities in the Western Tradition I	4
3450:216	Concepts of Calculus II	4
3460:210	Data Structures and Algorithms I	4
5540:xxx	Physical Education	1
6200:201	Accounting Concepts and Principles for Business	3
6200:202	Managerial Accounting	3
	Area Studies/Cultural Diversity Requirement	4
	Intermediate Foreign Language	6
	Natural Science Requirement	<u>4</u>
		36

**Mathematics****First Year**

3300:111	English Composition I	4
3300:112	English Composition II	3
3450:208	Discrete Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
3460:209	Introduction to Computer Science	4
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Natural Science requirement	<u>8</u>
		38

\* Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

	<b>Credits</b>	
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3460:210	Data Structures and Algorithms I	4
5540:xxx	Physical Education	1
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Social Studies requirement	<u>6</u>
		35

**3700: Political Science\*****First Year**

3300:111	English Composition I	4
3300:112	English Composition II	3
3700:100	Government and Politics in the U.S.	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Social Science Requirement	3
	Electives	<u>3</u>
		32

**Second Year**

3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	8
	Electives	<u>4</u>
		32

**3750: Psychology\*****First Year**

3300:111	English Composition I	4
3300:112	English Composition II	3
3750:100	Introduction to Psychology	3
3750:105	Professional and Career Issues in Psychology	1
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Electives	<u>2</u>
		32

**Second Year**

3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	8
	Electives	<u>4</u>
		32

**3850: Sociology\*****First Year**

3300:111	English Composition I	4
3300:112	English Composition II	3
3850:100	Introduction to Sociology	4
3850:104	Social Problems	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Social Science Requirement	<u>3</u>
		32

**Second Year**

3400:210	Humanities in the Western Tradition I	4
3870:150	Cultural Anthropology	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	<u>8</u>
		32

\* Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

**3870: Sociology/Anthropology\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3870:150	Cultural Anthropology	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Natural Science Requirement	4
	Social Studies Requirement	<u>3</u>
		33
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
3850:100	Introduction to Sociology	4
3870:151	Evolution of Man and Culture	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	<u>4</u>
		31

**4200: Chemical Engineering\***

First year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
4100:101	Tools for Engineering	3
4200:121	Chemical Engineering Computations	2
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	<u>3</u>
		33
<b>Second year</b>		
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3250:244	Introduction to Economic Analysis	3
3400:210	Humanities in the Western Tradition I	4
3450:223	Analytic Geometry-Calculus III	4
3450:235	Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	<u>4</u>
		32

**4300: Civil Engineering\***

First Year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
4100:101	Tools for Engineering	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Social Science Requirement	<u>3</u>
		32
<b>Second Year</b>		
3250:244	Introduction to Economic Analysis	3
3400:210	Humanities in the Western Tradition I	4
3450:223	Analytic Geometry-Calculus III	4
3450:235	Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
4300:201	Statics	3
4600:203	Dynamics	3
	Humanities Requirement	<u>6</u>
		34

**4400: Electrical Engineering**

First year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
4100:101	Tools for Engineering	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Social Science Requirement	<u>3</u>
		32
<b>Second year</b>		
3250:244	Introduction to Economic Analysis	3
3450:223	Analytic Geometry-Calculus III	4
3450:235	Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
4300:201	Statics	3
4400:231	Circuits I	3
4400:232	Circuits II	3
4400:243	Signal Analysis	3
4400:340	Electric Circuits Laboratory	1
4450:208	Programming for Engineers	<u>3</u>
		34

**4600: Mechanical Engineering**

First year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
4100:101	Tools for Engineering	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Social Science Requirement	<u>3</u>
		32
<b>Second year</b>		
3250:244	Introduction to Economic Analysis	3
3400:210	Humanities in the Western Tradition I	4
3450:223	Analytic Geometry-Calculus III	4
3450:235	Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
4300:201	Statics	3
4300:202	Introduction: Mechanics of Solids	3
4600:203	Dynamics	3
	Humanities Requirement	<u>6</u>
		37

**5200: Elementary Education\***

First Year		Credits
3100:103	Natural Science-Biology	4
3300:111	English Composition I	4
3300:112	English Composition II	3
3350:100	Introduction to Geography	3
3400:250	United States History to 1877	4
	or	
3400:251	United States History since 1877	4
	or	
3700:100	Government and Politics in the U.S.	4
5570:101	Personal Health	2
7600:106	Effective Oral Communication	3
	Natural Science Requirement	4
	Mathematics Requirement	3
	Social Science Requirement	<u>3</u>
		33
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
5050:210	Characteristics of Learners	3
5050:211	Teaching and Learning Strategies	3
5200:215	The Child, the Family and the School	3
5200:220	Visual Arts Culture	1
5200:250	Developing the Processes of Investigation	3

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\* Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

		Credits
5540:xxx	Physical Education	1
5550:334	Games & Rhythms: Elementary Grades	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Concentration Area Course	_3
		34

		Credits
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
7100:xxx	Studio Art Courses	6
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Mathematics Requirement	3
	Natural Science Requirement	8
	Electives	_1
		32

**5300: Secondary Education\***

<b>First Year</b>		
3300:111	English Composition I	4
3300:112	English Composition II	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Mathematics Requirement	3
	Natural Science Requirement	8
	Social Science Requirement	6
	Teaching Field(s) Course	
	or	
	Electives	_4
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
5050:210	Characteristics of Learners	3
5050:211	Teaching and Learning Strategies	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Teaching Field(s) Courses	
	or	
	Electives	12
		32

**6000: Business Administration****Options****Accounting, Finance, Management, Marketing, Advertising**

<b>First Year</b>		
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:215	Concepts of Calculus I	4
3750:100	Introduction to Psychology	3
	or	
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	Natural Science Requirement	8
	Psychology/Sociology Elective	_3
		33-34
<b>Second Year</b>		
2440:130	BASIC Programming for Business	3
	or	
3460:126	Introduction to BASIC Programming (except Accounting majors)	3
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3400:210	Humanities in the Western Tradition I	4
6200:201	Accounting Concepts and Principles for Business	3
6200:202	Managerial Accounting	3
6200:255	Information Processing (Accounting majors only)	3
6400:220	Legal and Social Environment of Business	3
	(except Accounting majors)	
6500:221	Quantitative Business Analysis I	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	_6
		31-35

**7100: Art\***

<b>First Year</b>		
3300:111	English Composition I	4
3300:112	English Composition II	3
5540:xxx	Physical Education	1
7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:xxx	Studio Art Courses	6
7600:106	Effective Oral Communication	3
	Social Science Requirement	6
	Electives	_3
		32

**7400: Home Economics and Family Ecology\*****Options****Clothing, Textiles and Interiors**

<b>First Year</b>		
3300:111	English Composition I	4
3300:112	English Composition II	3
5540:xxx	Physical Education	1
7100:144	Two-Dimensional Design	3
7400:133	Nutrition Fundamentals	3
7400:147	Orientation to Professional Studies in Home Economics and Family Ecology	1
7600:106	Effective Oral Communication	3
	Economics Requirement	3
	Foreign Language Courses	
	or	
	Language Alternative Courses	8
	Mathematics Requirement	_3
		32
<b>Second Year</b>		
3150:129	Introduction to General, Organic and Biochemistry I	4
3150:130	Introduction to General, Organic and Biochemistry II	4
3400:210	Humanities in the Western Tradition I	4
3850:100	Introduction to Sociology	4
7400:201	Courtship, Marriage, and Family Relations	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Electives	_3
		32

**Dietetics\***

<b>First Year</b>		
3150:129	Introduction to General, Organic and Biochemistry I	4
3150:130	Introduction to General, Organic and Biochemistry II	4
3300:111	English Composition I	4
3300:112	English Composition II	3
3470:260	Basic Statistics	3
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education	1
7400:133	Nutrition Fundamentals	3
7400:147	Orientation to Professional Studies in Home Economics and Family Ecology	1
7400:201	Courtship, Marriage, and Family Relations	3
	or	
7400:265	Child Development	3
7600:106	Effective Oral Communication	_3
		33
<b>Second Year</b>		
3100:130	Principles of Microbiology	3
3100:208	Human Anatomy and Physiology	4
3100:209	Human Anatomy and Physiology	4
3400:210	Humanities in the Western Tradition I	4
3750:100	Introduction to Psychology	3
6200:201	Accounting Concepts and Principles for Business	3
	or	
2420:211	Basic Accounting I	3
	Areas Studies/Cultural Diversity Requirement	4
	Economics Requirement	3
	Humanities Requirement	_6
		34

**Family Life and Child Development**

<b>First Year</b>		
3300:111	English Composition I	4
3300:112	English Composition II	3
3750:100	Introduction to Psychology (Family Life Option only)	3
3750:230	Developmental Psychology (Family Life Option only)	4
3850:100	Introduction to Sociology	4
5540:xxx	Physical Education	1
7400:133	Nutrition Fundamentals	3
7400:147	Orientation to Professional Studies in Home Economics and Family Ecology	1

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Credits

7600:106	Effective Oral Communication	3
	Mathematics Requirement	3
	Electives	3
		<u>32</u>
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
7400:201	Courtship, Marriage, and Family Relations	3
7400:265	Child Development	3
7750:276	Introduction to Social Welfare (Family Life Option only)	4
	Areas Studies/Cultural Diversity Requirement	4
	Economics Requirement	3
	Humanities Requirement	6
	Natural Science Requirement	<u>8</u>
		<u>35</u>

**Food Science**

<b>First Year</b>		
3150:129	Introduction to General, Organic and Biochemistry I	4
3150:130	Introduction to General, Organic and Biochemistry II	4
3300:111	English Composition I	4
3300:112	English Composition II	3
3470:260	Basic Statistics	3
5540:xxx	Physical Education	1
7400:133	Nutrition Fundamentals	3
7400:147	Orientation to Professional Studies in Home Economics and Family Ecology	1
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	or	
	Language Alternative Courses	<u>8</u>
		<u>34</u>
<b>Second Year</b>		
2440:120	Computer and Software Fundamentals	2
3100:130	Principles of Microbiology	3
3400:210	Humanities in the Western Tradition I	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	4
7400:201	Courtship, Marriage, and Family Relations	3
	or	
7400:265	Child Development	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	or	
	Language Alternative Courses	<u>8</u>
		<u>35</u>

**7600: Communication**

<b>First Year</b>		
3300:111	English Composition I	4
3300:112	English Composition II	3
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
7600:102	Survey of Mass Communication	3
7600:115	Survey of Communication Theory	3
7600:200	Careers in Communication	1
	Mathematics Requirement	3
	Social Science Requirement	6
	Elective (typing/word processing recommended)	<u>5</u>
		<u>32</u>
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Communication Major Emphasis Courses	8
	Foreign Language Courses	
	or	
	Language Alternative Courses	8
	Humanities Requirement	6
	Natural Science Requirement	<u>8</u>
		<u>36</u>

**7750: Social Work**

<b>First Year</b>			<b>Credits</b>
3300:111	English Composition I		4
3300:112	English Composition II		3
3470:260	Basic Statistics		3
3700:100	Government and Politics in the U.S.		4
3750:100	Introduction to Psychology		3
3850:100	Introduction to Sociology		4
5540:xxx	Physical Education		1
7750:276	Poverty in the U.S.		3
7750:276	Introduction to Social Welfare		4
	Economics Requirement		<u>3</u>
			<u>32</u>
<b>Second Year</b>			
3100:103	Natural Science-Biology		4
3400:210	Humanities in the Western Tradition I		4
7600:106	Effective Oral Communication		3
7750:xxx	Social Work Requirements		8
	Areas Studies/Cultural Diversity Requirement		4
	Humanities Requirement		6
	Natural Science Requirement		4
	Social Science elective		<u>3</u>
			<u>36</u>

**8200: Nursing**

<b>First Year</b>			<b>Credits</b>
3100:130	Principles of Microbiology		3
3150:129	Introduction to General, Organic and Biochemistry I		4
3150:130	Introduction to General, Organic and Biochemistry II		4
3300:111	English Composition I		4
3300:112	English Composition II		3
3800:120	Introduction to Ethics		3
3750:100	Introduction to Psychology		3
3850:100	Introduction to Sociology		4
	or		
3870:150	Cultural Anthropology		4
5540:xxx	Physical Education		1
8200:100	Introduction to Nursing		1
	Economics Requirement		<u>3</u>
			<u>33</u>

Students are eligible to apply to the College of Nursing during spring semester of the first year if they have completed all of the courses listed above and attained a grade point average of 2.50 or higher. If the student is accepted into the college, attendance at the Akron campus is necessary during the second year in required clinical nursing courses. The following list of courses may be taken at Wayne College during the second year by students who do not satisfy the admission requirements.

<b>Second Year</b>			<b>Credits</b>
3100:208	Human Anatomy and Physiology		4
3100:209	Human Anatomy and Physiology		4
3400:210	Humanities in the Western Tradition I		4
3470:260	Basic Statistics		3
3750:230	Developmental Psychology		4
7600:106	Effective Oral Communication		3
	Areas Studies/Cultural Diversity Requirement		4
	Humanities Requirement		<u>3</u>
			<u>29</u>

# University College

Karla Mugler, Ph.D., *Dean, University College*  
 Bradley McClain, J.D., *Director, Pre-College Programs*  
 Alice Gail Bier, Ph.D., *Director, International Programs*  
 Pamela Rupert, Ph.D., *Director, Developmental Programs*  
 Virgil Starks, III, M.A., *Assistant Dean, University College*  
 Charles Stephens, M.Ed., *Director, Minority Student Retention*  
 Gary Traveny, M.A., *Director, New Student Orientation*

## OBJECTIVES

The purpose of the University College is to further the objectives of The University of Akron by providing a quality program of collegiate education and to pursue the following aims:

- To offer the student a basic program of General Education and the prerequisite courses for advancement to the degree-granting colleges.
- To offer a program of courses to prepare students for enrollment in General Education courses.
- To provide access to and information about higher education to eligible middle school and high school students
- To provide academic support services for students to strengthen their basic skills and facilitate their success in college courses.
- To assist new students in their transition to college through a comprehensive New Student Orientation Program prior to enrollment, as well as a semester-length University Orientation Course.
- To direct students to the proper curricula to ensure that students will enter their degree-granting colleges prepared to undertake advanced course work.
- To provide career-related pre-professional work assignments for students in industrial, commercial, professional, governmental, or service organizations.
- To encourage, foster, and support departmental, collegiate, and community programs and projects which further intercultural awareness and international understanding.
- To provide services to international students, visiting scholars, and University foreign employees to facilitate their degree objectives, enhance their research, secure their immigration status, and use their intercultural experiences as educational resources.
- To enhance the academic success of minority students through advising and workshops.

The college recommends the student for advancement to the degree-granting colleges upon satisfactory completion of the appropriate requirements.

A student who completes 30 semester credits and achieves a grade-point average of 2.00 ("C") or better may be eligible for transfer to a degree-granting college. A student should always check with an adviser to determine specific requirements for transfer to the program of the student's choice.

Acceptance of a student in a degree-granting college is the responsibility of the respective collegiate dean, the dean of the University College, and heads of departments concerned.

## GENERAL EDUCATION

(effective for students admitted Fall 1994 and thereafter)

The General Education Program of The University of Akron is the core of courses that provide the skills and knowledge considered essential for all graduates of the University. The General Education Program is designed to ensure, insofar as possible, that our graduates will possess:

- the capacity for critical, independent thought.
- a personal sense of values, tempered by tolerance and a regard for the rights of others.
- the ability to use language effectively as a medium of both thought and expression.
- the analytical skills necessary to make sound qualitative and quantitative judgments.
- the ability to describe and explain differences in civilizations and cultures.
- an understanding of the conditions that affect them as individuals and as members of society.

- the capacity to evaluate intellectual and artistic achievements.
- a knowledge of science, technology, and mathematics and their effects on human activities.
- a knowledge of positive mental and physical health practices.

## Recommended Core Curriculum

Students entering the University in the fall of 1994 or thereafter must complete the General Education Program, which consists of 42 credits distributed among eight categories. Students are advised to select General Education courses in conjunction with courses needed for their major during their first few years of study. *Courses noted with a single asterisk (\*) will apply toward the General Education requirement only for students enrolled in the Community and Technical College.* All students are responsible for meeting prerequisites for the necessary courses listed in the General Education Program. **Note:** Specific departmental requirements may vary, so students are encouraged to consult an adviser for specific information about selecting appropriate General Education courses from the recommended core curriculum.

### English Composition: 7 credits – 2 courses

		Credits
2020:121	English*	4
	or	
3300:111	English Composition I	4
3300:112	English Composition II	3

### Mathematics: 3 credits

(Students enrolling in a higher-level math course may use this course to meet their General Education requirement)

2030:151,152,153	Elements of Math I, II, III*	6
(Must complete all 3 courses. Only 3 credits apply toward fulfilling General Education requirement)		
2030:161	Math for Modern Technology*	4
3450:113	Combinatorics/Probability	1
3450:114	Matrices	1
3450:115	Linear Programming	1
3450:127	Trigonometry	2
3450:135	Math for Liberal Arts	3
3450:138	Math of Finance	1
3450:140	Math for Elementary Teachers	3
3450:145	College Algebra	4
3470:260	Basic Statistics	3
3470:261	Introduction to Statistics I	2
3470:262	Introduction to Statistics II	2

### Natural Science: 8 credits minimum – At least two courses, one of which must be a lab

(Students in higher-level science courses with a lab may use those courses to meet their General Education requirements.) Select one course each from a minimum of two different sets:

#### Biology

2780:106	Anatomy and Physiology for Allied Health I*	3
2780:107	Anatomy and Physiology for Allied Health II*	3
3100:100	Introduction to Botany/Lab (Wayne College only)	4
3100:101	Introduction to Zoology/Lab (Wayne College only)	4
3100:103	Natural Science Biology/Lab	4
3100:108	Introduction to Biological Aging (Wayne College only)	3

#### Chemistry

2840:100	Basic Chemistry*	3
2840:101	Introductory Chemistry*	3
2840:102	Introductory and Analytical Chemistry*	3
3150:100	Chemistry and Society	3

#### Geology

3100:104	Introduction to Ecology Lab*	1
3100:105	Introduction to Ecology*	3
3370:100	Earth Science	3
3370:103	Natural Science Geology	3
3370:121-138	Concepts in Geology	1
3370:200	Environmental Geology	3
3370:201	Exercises in Environmental Geology I/Lab	1
3370:203	Exercises in Environmental Geology II/Lab	1

#### Physics

2820:161	Technical Physics: Mechanics I*	2
2820:162	Technical Physics: Mechanics II*	2
2820:163	Technical Physics: Electricity and Magnetism*	2
2820:164	Technical Physics: Heat and Light*	2
3650:130	Descriptive Astronomy/Lab	4
3650:133	Music, Sound and Physics/Lab	4
3650:137	Light/Lab	4

\* Will apply toward the General Education requirement only for students enrolled in the Community and Technical College.

**Oral Communication: 3 credits**

		Credits
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

**Social Sciences: 6 credits**

(One course from two different sets for a minimum of 6 credits)

**Set 1 - Economics**

2040:247	Survey of Basic Economics*	3
3250:100	Introduction to Economics	3
3250:200	Principles of Microeconomics	3
3250:244	Introduction to Economic Analysis	3

**Set 2 - Geography**

3350:100	Introduction to Geography	3
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**Set 3 - U.S. Government/Politics**

2040:242	American Urban Society*	3
3700:100	Government and Politics in the United States	4
3700:150	World Politics and Governments	3

**Set 4 - Psychology**

2040:240	Human Relations*	3
3750:100	Introduction to Psychology	3

**Set 5 - Sociology/Anthropology**

3850:100	Introduction to Sociology	4
3870:150	Cultural Anthropology	4

**Set 6 - United States History**

3400:250	U.S. History to 1877	4
3400:251	U.S. History since 1877	4

**Set 7 - Science/Technology/Society**

2040:241	Technology of Human Values	2
3600:125	Theory and Evidence	3

**Humanities: 10 credits – 3 courses**

All students are required to complete:

3400:210	Humanities in the Western Tradition I	4
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Students may select one course from two different sets below for a minimum of six additional credits:

**Set 1 - Fine Arts**

7100:210	Visual Arts Awareness	3
7500:201	Exploring Music	3
7800:301	Introduction to Theatre and Film	3
7900:200	Viewing Dance	3

**Set 2 - Philosophy/Classics**

3200:189	Mythology of Ancient Greece	3
3200:220	Introduction to the Ancient World	3
3600:101	Introduction to Philosophy	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3

**Set 3 - Literature**

3300:250	Classic and Contemporary Literature	3
3300:252	Shakespeare and His World	3
Other literature in English translation:		
3200:361	Literature of Greece	3
3520:350	Themes in French Literature in Translation	3
3580:350	Literature of Spanish-America in Translation	3

**Set 4**

3400:211	Humanities in the Western Tradition II	4
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**Area Studies & Cultural Diversity: 4 credits – 2 courses**

2040:240	The Black American	2
3350:375	Geography of Cultural Diversity	2
3400:385	World Civilization: China	2
3400:386	World Civilization: Japan	2
3400:387	World Civilization: SE Asia	2
3400:388	World Civilization: India	2
3400:389	World Civilization: Near East	2
3400:390	World Civilization: Africa	2
3400:391	World Civilization: Latin America	2

**NOTE:** A student majoring in medical technology or engineering is only required to take two credits from this area of General Education requirements.**Physical Education: 1 credit - 2 courses**

5540:120-183	Physical Education	.5 credit each
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\* Will apply toward the General Education requirement only for students enrolled in the Community and Technical College.

**DEVELOPMENTAL PROGRAMS**

The Department of Developmental Programs provides academic support for all University students, especially those who wish to strengthen their educational preparation in specific areas or who have been out of school for a number of years and feel the need to refresh academic skills. Through developmental courses, individual tutoring and work in the writing, reading, and math laboratories, such a student can develop the skills necessary for acceptable performance at the college level.

Developmental courses are offered in writing, reading, college reading and study skills, mathematics, and chemistry. Classes are small to provide maximum opportunity for individual help.

The writing, reading and math laboratories are open to all undergraduate students without charge and provide professional assistance in these vital skills.

Free peer-tutoring is provided for most freshman and sophomore courses.

**TUTORIAL SERVICES**

A number of tutorial services are available free of charge to help students develop academically.

- Peer tutoring is available for most freshman and sophomore courses, including Chemistry, Physics, Mathematics, Sociology, Psychology, Science, Business, and Modern Languages. Tutoring is conducted either on an individual basis or in small groups. Interested students should inquire at Carroll Hall 215.
- The Mathematics Lab, Carroll Hall 208, provides professional help for students who are having difficulty in any entry-level mathematics course.
- The Writing Lab, Carroll Hall 212, offers professional assistance to students taking any course requiring writing.
- The Reading Lab, Carroll Hall 217, provides professional instruction in a variety of reading and study strategies, memory techniques, and test-taking methods as they apply to the specific courses a student is taking.

All of these services are located on the second floor of Carroll Hall; main office Carroll Hall 210, (216) 972-7086.

**UNIVERSITY ORIENTATION 101**

The first semester at a university should be a challenging experience for each student. University College offers a course which can help turn the challenges into successes. University Orientation 101 is a two-credit course which provides students with the opportunity to discover more about the institution and to learn strategies for a successful college experience. Time management, effective communication, critical-thinking skills, note-taking and test-taking skills are highlighted as well as information about University services available to students. Students may register for University Orientation 101 during their New Student Orientation. For additional information, contact New Student Orientation at 972-5347.

**MINORITY STUDENT RETENTION**

The Office of Minority Student Retention was created to enhance the academic success of minority students. The major services and programs provided by this department include:

- Academic Advising and Counseling
- Minority Freshmen Orientation
- Academic Monitoring of Freshmen Grades
- Cultural Awareness Workshops
- Support and Resource Service for Minority Parents
- Workshops on Minority Retention Strategies
- Faculty Mentoring Program
- Hispanic Outreach Initiatives

For additional information, contact the Office of Minority Student Retention, Spicer Hall Room 120, or call (216) 972-7314.

## OFFICE OF INTERNATIONAL PROGRAMS

In support of the The University of Akron's mission to internationalize the university experience, the Office of International Programs undertakes the following:

- To develop and support international study experiences for The University of Akron students that will aid them in becoming global citizens.
- To establish and maintain contacts with foreign universities and colleges that will internationally encourage student, staff, and faculty development.
- To encourage international students to study at The University of Akron.
- To aid the integration of international students, scholars, and scientists through the provision of services and activities such as cultural orientation, counseling, immigration and academic advising, and on- and off-campus cultural opportunities.
- To develop, using campus and community resources, activities designed to promote international understanding and an appreciation of cultural diversity through international contact.
- To support the development of departmental, collegiate, and community programs and projects which further intercultural awareness and international understanding both on and off campus.

For more information, contact:

Office of International Programs  
Polsky 483  
The University of Akron  
Akron, OH 44325-3101

Phone: (216) 972-6349  
FAX: (216) 972-8604  
E-mail: r1agb@vm1.cc.uakron.edu

## SUMMA ST. THOMAS SCHOOL OF NURSING DIPLOMA NURSING PROGRAM

The University, in cooperation with the hospital school of nursing at SUMMA St. Thomas School of Nursing in Akron, provides courses basic to a diploma in nursing.

Nursing students must meet the University entrance requirements and are enrolled in regular credit courses.

Applications for this program are handled through SUMMA St. Thomas School of Nursing which awards the diploma.

The following University courses are included in the two-year program:

		<i>Credits</i>
3100:130	Microbiology	3
3100:208	Anatomy and Physiology	4
3100:209	Anatomy and Physiology	4
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology	4
7400:316	Science of Nutrition	4

## ACADEMIC ACHIEVEMENT PROGRAMS

**Upward Bound** is designed to provide intense academic, cultural and social experiences for its students, enabling them to develop the skills, attitudes and motivation necessary to enter and succeed in college. Students receive an assortment of services such as academic support, counseling, and advising and participate in the program year round. Upward Bound is federally funded through the United States Department of Education.

The **National Youth Sports Program (NYSP)** is an instructional program for eligible boys and girls that provides a constructive outlet for the summertime energies at no cost to the participants. The program uses sports instruction and competition as a vehicle for motivating young people from poverty areas to earn and learn self-respect. The program provides participants with instruction in career and educational opportunities and exposure to the college environment. Each participant receives a free medical examination, and follow-up if necessary. Each participant daily receives a free meal or snack. The aim of the NYSP is to help eligible youths learn to "walk tall—talk tall—stand tall."

The **Upward Bound/Pre-College Engineering Program** is designed to encourage and stimulate the interests of targeted high school students who have expressed or demonstrated interest and skill in mathematics or science to pursue careers in engineering.

The **Firestone Fellows Strive Toward Excellence Program (STEP)** is a pre-college preparatory program designed to assist students who aspire to attend college. STEP selects students in grade six. They participate in STEP for two years, then move into the University's Upward Bound Program, which assists them through high school. Program graduates are guaranteed admission to the University and granted scholarship assistance, provided they successfully complete both programs. Selected students are called "Firestone Fellows." This program serves students who attend Akron Public Schools.

**Educational Talent Search (ETS)**, a is a federally-funded TRIO program which provides services to prepare participants for enrollment or re-enrollment in post-secondary educational programs.

The **Upward Bound Regional Math/Science Program** is designed to provide students with the skills and motivation necessary to pursue and complete an undergraduate course of study, preferably in mathematics or the sciences. Focusing on polymer science, the program serves 50 students in the target states of Indiana, Pennsylvania, Ohio and Michigan. The six-week summer residential program consists of integrated instructional classes in Polymer Science/Chemistry, Mathematics, English/Technical Writing and Computer Science plus hands-on laboratory courses in Polymer Science and Computer Science. Other components include: a Research Project, Career Exploration, field trips, cultural experiences, recreational activities, college visits and mentoring by polymer science professors. Emphasis is placed on visualization and "doing" science and math utilizing hands-on projects, independent research, faculty interaction and mentoring while taking advantage of the resources of the world's largest, state-of-the-art polymer instructional and research facility at The University of Akron.

# Reserve Officer Training Corps (ROTC)

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## 1500: AEROSPACE STUDIES

The Department of Aerospace Studies provides the student with the opportunity to pursue a commission in the United States Air Force while qualifying for graduation from The University of Akron. The United States Air Force has been in the forefront of contributions to flight, research and development, effective management of resources and people, and education largely because of the existence of a well-educated, versatile and professional officer corps. The primary source of these officers is the Air Force ROTC.

The program is designed to prepare the student to become an officer who is dedicated and responsible; critical and creative in thinking; able to communicate clearly; and skilled in effective management.

Both the four- and two-year programs are open to male and female students who will have completed at least one course in mathematical reasoning and a baccalaureate degree at commissioning. Registration information may be obtained by contacting the Department of Aerospace Studies, 185 S. Forge St., Schrank Hall South 9, Akron, Ohio 44325-6102, (216) 972-7653.

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## Programs

### Four-Year Program

Students of The University of Akron may pursue the four-year program. (Must be a full-time student during the last two years of the program.) Enrollment procedures for the first two years of Air Force ROTC known as the general military course (GMC) are the same as for any other University courses. The GMC consists of one hour of classroom work and two hours of Aerospace Studies Laboratory (Leadership Laboratory) each week and provides 1.5 semester credits.

Portions of the GMC may be accredited for completion of two or more years of high school junior ROTC, participation in Civil Air Patrol, military school training or prior service in any branch of the United States Armed Forces.

General military course cadets who wish to compete for the last two years of the AFROTC program, the Professional Officer Course (POC), must meet the additional qualifications.

### Two-Year Program

The basic requirement for entry into the two-year program is to have two academic years remaining, either at the undergraduate or the graduate level, or a combination of the two. Entry into the POC is competitive in nature. A two-year program applicant must meet the qualifications described below. A student in the POC receives a non-taxable monthly subsistence allowance of \$150.

Applications for the two-year program should be made as early in the academic year as possible so that all requisites may be completed in time for summer field training. The POC consists of three hours of classroom work and two hours of Aerospace Studies Laboratory (Leadership Laboratory) each week, and provides three semester credits.

### Supplemental Courses

All GMC scholarship cadets are required, and nonscholarship cadets encouraged, to demonstrate proficiency or successfully complete a course in English composition. All POC cadets must demonstrate proficiency or complete a course in mathematical reasoning.

### Field Training

In the summer prior to entering the POC, all four-year program AFROTC cadets and student applicants for the two-year program must attend field training at an Air Force base where they will learn and make use of training and leadership techniques in close contact with other cadets.

The four-year program student spends four weeks at an encampment, while field training for the two-year program applicant lasts six weeks. The additional two weeks for the two-year program applicant are used to cover the academic work taken by the cadet who completed the General Military Course (GMC).

Uniforms, lodging and meals are provided without charge, and travel pay is authorized to and from the individual's home or school. The cadet and applicant receive pay at approximately half the rate of a second lieutenant.

### Flight Training

Pilot-qualified students must successfully complete the Flight Screening Program (FSP). In addition to participation in a ground school covering aircraft systems, navigation, and regulations pertaining to flying, cadets will receive flight instruction from qualified civilian or Air Force instructors.

### Base Visits

Classroom instruction is made more meaningful for the cadet through visits to Air Force bases. To bring the scope of Air Force operations into a clearer perspective, Air Force ROTC strives to enable every cadet to make at least one such visit each year. Many cadets have the opportunity to make more.

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## Requirements for Admission

### General Qualifications

- Be a citizen of the United States or applicant for naturalization.
- Be in sound physical condition.
- Be of good moral character.
- Meet age requirements as follows:
  - AFROTC four-year scholarship recipients must be at least 17 years of age and able to complete commissioning requirements prior to age 25.
  - If not on scholarship status, but designated for pilot or navigator training, be able to complete all commissioning requirements prior to age 26.
  - If not on scholarship status and not qualified for flying training, be able to complete commissioning requirements prior to age 30.

### Additional Qualifications for Professional Officer Course

- Be at least 17 years of age.
- Minimum GPA of 2.0.
- For the four-year program cadet, complete the General Military Course or receive credit for junior ROTC, Civil Air Patrol, military school training or prior service, and complete the four-week field training course.
- For the two-year student applicant, complete the six-week field training course.
- Interview with Professor of Aerospace Studies.
- Pass Air Force academic, fitness, and medical exams.

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## Requirements for Commissioning

- Complete the POC and field training.
- Earn at least a baccalaureate degree.
- Agree to accept, if offered, a commission in the United States Air Force.
- Agree to serve for a period of not less than four years on active duty after commissioning; or, if accepted for a flying training program, agree to serve for six years after navigator training or eight years after pilot training.

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## Scholarships

Air Force ROTC college scholarships are available to qualified applicants in both the two- and four-year AFROTC programs covering periods of two through four years. Every scholarship pays for tuition, and most laboratory, textbook and incidental fees.

Four-year scholarships are available for high school applicants in science, engineering, and some non-technical fields. Applicants will be evaluated on the basis of:

- CEEB Scholastic Aptitude Test (SAT) or the American College Test (ACT) results.
- High school academic record.
- Extracurricular and athletic activities.
- Interview.
- Passing an Air Force medical examination.

All three- and two-year scholarships are awarded on a competitive basis and an applicant is evaluated on:

- Air Force Officer Qualifying Test.
- Collegiate grade-point averages.
- Extracurricular and athletic activities.
- Screening and nomination board rating.
- Academic major and potential active duty career.

Scholarship information may be obtained by contacting the Department of Aerospace Studies.

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## Financial Allowances

A cadet enrolled in the POC or on scholarship will receive a non-taxable subsistence allowance of \$100 per month. The professor of Aerospace Studies may also give cash awards.

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## Uniforms and Textbooks

All AFROTC uniforms and textbooks are provided by the Air Force both for on-campus courses and at field training.

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## 1600: MILITARY SCIENCE

The University's Army Reserve Officer Training Corps (ROTC) was established in 1919, making it one of the oldest in the country. The main goal of the program is to develop the future military leaders of our country. It provides the active Army, Army Reserve and Army National Guard with commissioned male and female officers. Army ROTC is your chance to develop leadership skills for success in your career, be it in the Army or as a civilian professional. Upon graduation with a four-year degree and ROTC, you will be leaving your alma mater as a second lieutenant in the United States Army.

A student enrolled in Army ROTC has an opportunity to study and participate in leadership and management experiences which are unique to the college curriculum. Leadership, self-discipline, responsibility and physical stamina are stressed as the student learns to plan, organize, motivate and lead others. Program goals are to develop decision-making capabilities through detailed examination of leadership factors; expand oral and written communication arts; provide some technical training in basic military skills; and develop an understanding of the relationship between the student's basic degree field and its application in the United States Army.

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## Programs

### Four-Year Program

A full-time student enrolled in The University of Akron or Wayne College may enroll in the Army four-year program. Freshmen and sophomores enroll in the basic military course Military Science I and II (MS I, MS II) of the four-year program for two credits per semester. MS I and II classes are held two hours each week, to include a mandatory two-hour leadership laboratory, and cover studies in military history, leadership fundamentals, basic military skills, first aid, Leadership Assessment Program, and Army organization. Enrollment in MS I or MS II constitutes no obligation to military service or continuance into the advanced course and the credits received can be applied toward elective requirements.

A student who completes the basic course (MS I and MS II) is eligible for and may apply for enrollment into the advanced course, which may lead to a commission. Advanced course studies are held four hours per week, to include a mandatory two-hour leadership laboratory and physical training three times per week for three semester credits. The course of study includes: advanced leadership, application of tactics, ethics and professionalism, methods of instruction, resource management, and the responsibilities of an officer. The advanced course includes a six-week paid summer camp attended usually between the junior and senior

year. A student in the advanced course is paid \$150 per month, or approximately \$1,350 per school year. Upon commissioning, the student will serve either with the Reserves, the National Guard or on active duty.

### Two-Year Program

A student can also enter the advanced course by attending a basic six-week military skills summer camp at Fort Knox, Kentucky, just prior to the MS III year or Junior year, or by having prior military service or training. This equals the basic course of the four-year program, and makes the student eligible to enter the advanced course as described under the four-year program.

### Cadet Activities

The Department of Military Science offers numerous activities to enrich classroom instruction; provide a better understanding of the military and military life; and improve technical skills. These include the following:

- Adventure training: marksmanship, rappelling, backpacking, water survival training and white water rafting
- Social organizations
- Fraternal organizations
- Battlefield tours
- Intercollegiate military skills competition (Ranger Challenge)

### Advanced Military Training

Students enrolled in Military Science classes may volunteer for the following U.S. Army specialty schools as quotas become available. Special requirements and prerequisites must be met.

- Airborne Training
- Air Assault Training
- Mountain Warfare School
- Northern Warfare School

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## Requirements for Admission

Basic Course: None.

Advanced Course:

Completion of basic course, basic summer camp or prior service.

- Pass the Army physical fitness test, and meet the Army's height and weight standards.
- Permission of the professor of military science.
- Be in good academic standing with the University.
- Meet Army medical standards

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## Requirements for Commissioning

• Completion of a baccalaureate or advanced degree to include the following types of college courses:

- Written Communications
- Human Behavior
- Computer Literacy
- Math Reasoning
- Military History

- Meet Army medical standards
- Completion of the advanced ROTC course.
- Completion of advanced summer camp normally between Junior and Senior year.
- Pass Army physical fitness test.
- Agree to fulfill a service obligation to serve as a commissioned officer on active duty, in the Army Reserve, or in the Army National Guard.

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## Scholarships

The Army ROTC has four-year scholarships available to high school seniors. Additionally, there are three- and two-year scholarships available on a competitive

basis to students attending the University, whether or not they are enrolled in ROTC when applying for the scholarship. These scholarships provide tuition, fees, a flat rate for texts, and \$150 per month allowance to the student for up to 10 months of the school year. Scholarship students may spend three to four years on active duty. Free room scholarships are available to scholarship winners on a competitive basis.

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### **Uniforms and Textbooks**

Military textbooks for all ROTC courses and equipment for military training are provided free by the Department of Military Science. Uniforms are issued free to all students while enrolled in the program.

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### **Financial Allowances**

An advanced course cadet and scholarship students are paid a non-taxable allowance of \$150 per month for up to 10 months of the school year. A student attending basic summer camp or advanced camp is paid for travel expenses, meals, housing, and a salary.

The Professor of Military Science may also award cash stipends up to \$250 to students who excel in their academic studies. Stipends are based on academic merit, participation, and scholarship winners.

The starting salary for a newly commissioned officer is approximately \$25,000 per year which increases 15 percent per year on average for the next four years. Officers receive 30 days paid vacation per year.

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## **SPECIAL RESERVE AND NATIONAL GUARD PROGRAMS**

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### **Simultaneous Membership Program (SMP)**

Members of the Reserves or National Guard who are enrolled full-time in the University may enroll in advanced ROTC if they apply for SMP membership through their unit, are accepted by the professor of military science, and meet all other admission requirements for the advanced course (MS III and MS IV). Commissioning may occur upon completion of the advanced ROTC course, and the member will serve as an officer in the Reserves or National Guard.

An SMP member receives \$150 tax-free per month while in ROTC, is promoted to an E-5 officer trainee in the reserve/guard unit and receives E-5 pay.

# University Honors Program

Robert M. Holland, Ph.D., *Master*

## INTRODUCTION

The University Honors Program supports high achieving and highly motivated students with challenging curriculum options, honors classes, academic scholarships, priority in registration, priority assignment to rooms in the honors residence, and enhanced computer, library, and study facilities. Honors Program students who complete the requirements of their academic majors and of the University Honors Program with cumulative grade-point averages of at least 3.40 are recognized at graduation as University Scholars.

## ADMISSION

Every applicant for admission to the Honors Program is required to:

- Provide academic transcripts, test scores, or other documentation as needed.
- Submit an Honors Program application essay to the University Honors Council.
- Interview with a member of the University Honors Council.

To be admitted to the Honors Program, a student must be enrolled as a full-time student in a bachelor's degree program.

A student may be admitted to the Honors Program upon graduation from high school, upon transfer from another college or university, or following an assessment of his or her academic and career record.

To be considered for admission, an applicant entering from high school must provide evidence of at least two of the following:

- High school grade-point average of 3.5 or above.
- Class rank within the highest 10 percent.
- Admissions test scores (ACT 27 or SAT 1300) ranking in the highest 10 percent nationally.

Other applicants, whether transfer students, continuing undergraduates, or students who have been away from school for several years, are evaluated in terms of previous grades and other appropriate documented accomplishments.

## HONORS CURRICULUM

### Academic Majors

An Honors Program student completes the requirements for a major in one of the colleges awarding bachelor's degrees. The student enrolls in honors classes, as available, within the major. The Senior Honors Project counts as advanced course work within the major.

### Honors Distribution Requirement

In place of The University of Akron General Education requirements (except for physical education), an Honors Program student completes an individually selected set of courses to meet the Honors Distribution Requirement. With the approval of the Honors Council, the student completes a balance of course work in the humanities, social sciences, and natural sciences, enrolling in honors sections of those classes when available. The Honors Distribution Requirement consists of the following four Group requirements totalling at least 38 credits:

#### Group I (The Humanities)

Six or more credits in courses offered by these departments:

3200: Classics	3400: History	3400: World Civilizations
3210: Greek	3400: Humanities in the Western Tradition	3600: Philosophy
3220: Latin		

#### Group II (Languages and the Arts)

Six credits of English Composition (Honors) and/or other English; and three or more credits from the other departments listed below:

3300: English	3530: German	7500: Music
3500: Arabic	3550: Italian	7600: Communication
3500: Chinese	3570: Russian	7700: Sign Language
3500: Japanese	3580: Spanish	7800: Theatre
3520: French	7100: Art	7900: Dance

#### Group III (The Social Sciences)

Six or more credits in courses offered by the departments below:

3250: Economics	3700: Political Science	3860: Sociology
3350: Geography	3750: Psychology	3870: Anthropology

#### Group IV (The Natural Sciences and Mathematics)

Three or more credits in mathematics, computer science, or statistics; and six or more credits of science courses:

3100: Biology	3450: Mathematics	3470: Statistics
3150: Chemistry	3460: Computer Science	3650: Physics
3370: Geology		

## Honors Colloquia

All Honors Program students participate in the Honors Colloquium series: Humanities in the sophomore year, social sciences in the junior year, natural sciences in the senior year. These one-semester, two-credit courses are interdisciplinary seminars open only to Honors Program students.

1870:250	Honors Colloquium: Humanities	(during second year; during first year if majoring in Nursing or Dietetics)
1870:360	Honors Colloquium: Social Sciences	(during third year; during second year if majoring in Nursing or Dietetics)
1870:470	Honors Colloquium: Natural Sciences	(during fourth year; during third year if majoring in Nursing or Dietetics)

## Senior Honors Project

The Honors Program student is required to complete a Senior Honors Project. This capstone of the honors student's academic and pre-professional studies is a chance to work intensively, with the guidance of a faculty sponsor, on a thesis, investigation, production, or problem of the student's choice. In designing, completing, and reporting on their Senior Honors Projects, these students have unique opportunities to apply their learning and test their abilities.

## Other Features

### Scholarships

Students admitted to the Honors Program are eligible for academic scholarships awarded by the University Honors Council, ranging from partial awards, covering part of each year's tuition and fees, to the Lisle M. Buckingham Scholarships, which provide full tuition and fees, room and board, for the full four years.

### Advising

In each academic department an Honors Preceptor advises Honors Program students, from orientation until graduation. With this preceptor's guidance, the student plans the Honors Distribution Requirement and schedules what is needed to meet departmental, college, and Honors Program degree requirements.

### Priority in Registration and Residence Assignment

Honors Program students are in the first group permitted to register for classes every semester. New Honors Program students also have priority in residence hall assignments within Gallucci Hall, which also contains the Honors Program offices, computer facilities, seminar rooms, individual and group studies, and study and meeting rooms for the use of commuting students.

### Open Classrooms

An Honors Program student, with the instructor's permission, may attend undergraduate classes or lectures for which the student is not formally enrolled. Free access is available.

### Access to Graduate Courses

With the permission of the preceptor and the instructor, an Honors Program student may enroll in graduate courses for either undergraduate or graduate credit.

## The University Honors Council

Consisting of faculty representing the seven colleges granting the bachelor's degree, two Honors Program students, the Director of Admissions, the Director of Student Financial Aid, and the Master of the Honors Program, the Honors Council is responsible for all decisions on admissions to the Honors Program, the awarding of Honors Program scholarships, the approval of each student's Honors Distribution Requirement and Senior Honors Project, and the definition of policies and procedures appropriate to the mission of the University Honors Program.

# Buchtel College of Arts and Sciences

Randall C. Moore, Ph.D., *Dean*  
William A. Francis, Ph.D., *Associate Dean*  
Roger B. Creel, Ph.D., *Associate Dean*  
Nancy K. Grant, Ph.D., *Associate Dean*

## OBJECTIVES

The Buchtel College of Arts and Sciences serves the objectives of the University, which states that learning may be procured, preserved and enlarged. More particularly, the college seeks to foster:

- The commitment to humanity—that loyal devotion to the heritage contained in those disciplines growing out of the ancient liberal arts which teach limitations and potentialities. The college seeks to provide an appropriate environment for students to acquire an ability to evaluate, integrate and understand the conditions of human existence, to understand themselves in the natural world and in a particular civilization or society. No course or combination of courses can ensure such understanding, and there is no schooling that can guarantee wisdom. Therefore, the college requires the student to study ideas and experiences that are the subject matter of a variety of disciplines:
  - the nurture of civility—those actions whereby virtue, the advancement of society, and wise and humane government are encouraged;
  - the advancement of learning—that substantive knowledge discovered and cultivated by critical curiosity, tested by experimentation, propagated by instruction and capable of affecting lives so that all may in a free society exercise responsible liberty. The most enduring contribution which the college can make is to help individuals acquire the skill, motivation and breadth of knowledge to continue their intellectual development throughout their lives.

The college recommends each student for the appropriate bachelor's, master's or doctoral degrees in accordance with the level of accomplishment.

Buchtel College is one of 10 degree-granting colleges at the University. Its name truthfully implies that its traditions date back farther than those of the other undergraduate colleges, since the University itself is an outgrowth of Buchtel College, a liberal arts institution founded in 1870.

When Buchtel College became the Municipal University of Akron the original name was retained in the College of Liberal Arts which was subsequently renamed the Buchtel College of Arts and Sciences. Then, and now, the liberal arts goal has been to offer broad training to the college student so that the student can prosper in life and sustain a creative appreciation of the arts and sciences.

The college is composed of the following three administrative divisions.

### Humanities Division

It is concerned with the intellectual traditions that have formed human nature and with their application to the present and future growth of the human being by affording insights into contemporary life and by promoting the development of the individual as a creative, critical and articulate person through the study of the classics, languages, literature and philosophy.

### Natural Sciences Division

It is the most professionally oriented division in this college, with the highest number of graduates continuing their education in specific areas of advanced study. In undergraduate years, a natural sciences student has a course of study with a strong emphasis in biology, chemistry, computer science, geology, mathematics, physics or statistics.

### Social Sciences Division

It stresses intelligent participation in community affairs through education in economics, geography, history, political science, psychology and sociology.

## COLLEGE REQUIREMENTS

### Admission

To be admitted to the college the student must have completed 30 credits of work and have the approval of the dean of the college.

### Degrees Awarded

*Humanities Division:* Bachelor of Arts.

*Natural Sciences Division:* Bachelor of Arts, Bachelor of Science, Bachelor of Science in Cytotechnology, Bachelor of Science in Medical Technology.

*Social Sciences Division:* Bachelor of Arts, Bachelor of Science in Geography/Cartography, Bachelor of Arts in Geography/Travel and Tourism, Bachelor of Science in Labor Economics, Bachelor of Science in Political Science/Criminal Justice, Bachelor of Science in Political Science/Public Policy Management.

### Baccalaureate Degrees

A student transferring into the college must have completed the equivalent of, or taken, 3300:111,2 English Composition I, II; three credits of mathematics or statistics earned in the Department of Mathematical Sciences; and the remainder of the lower-division General Education requirement.

Requirements for the bachelor's degree include:

- Completion of the General Education requirement.
- Three credits of mathematics or statistics earned in the Department of Mathematical Sciences.
- A minimum of 47 credits (exclusive of workshops and General Education courses) consisting of either:
  - 300/400-level courses both in and outside the student's major;
  - any courses outside major department as specified in and approved by the student's major adviser and the department or division head (permission should be obtained prior to enrollment), except workshops and General Education courses.
- Demonstration of ability to use English and another language:
  - for English, this ability will be shown by the completion of the General Education sequence of 3300:111,2 English Composition I, II;
  - for the other language, this ability will be shown by the completion of a second year of a foreign language on the University level or by demonstrating equivalent competence through a test approved by the Department of Modern Languages.
- Completion of requirements in a major field of study (see **Programs of Instruction**) and the recommendation of the student's major department.
- Attaining a minimum grade-point average of 2.00 in all work attempted in the major field at The University of Akron.
- Attaining a minimum grade-point average of 2.00 in all work in the major field, including transfer credits.
- Fulfilling the University requirements for a baccalaureate degree set forth in **Section 3** of this Bulletin.

Any student who wishes to receive a second baccalaureate degree must complete 32 credits of coursework in addition to the credits necessary for the first degree; 16 of the 32 credits must be in 300/400-level courses or other approved courses.

### Major Field

To qualify for graduation, a student must concentrate or major in the work of either a department or a division of the College. Part or all of these credits may be taken in specifically required courses depending upon the major chosen.

The longer and more professionally oriented majors should be started during the first year when the student is still under the guidance of the Office of Academic Advising Services.

Ordinarily a student will select a department in which to major. The exact requirements for each major will be found on the following pages. Some departments offer more than one type of major. No minor is required; but in some cases, the major includes certain courses in other departments. As soon as the student is transferred to the college, the chair of the student's major department or designate becomes the academic adviser.

A student who desires a broader education than the departmental major offers may elect a divisional major and qualify in the general area of the humanities, natural sciences or social sciences. The exact requirements for these majors will be

found on the following pages. As soon as the student contemplating a divisional major is transferred to the college, the chair of the student's major division becomes the academic adviser.

### Preparation for High School Teaching

A student interested in a teaching career on the high school level may qualify for secondary school certification by the Ohio State Department of Education while enrolled in the Buchtel College of Arts and Sciences. Generally the arts and sciences major subject will also constitute a teaching major, although a second teaching field usually is required. The education and psychology courses required for the secondary school teaching certificate may be taken as electives toward the arts and sciences degrees. Additional elective credits will generally enable the student to meet the requirement of a second teaching field, without exceeding the credits necessary for graduation.

The number of credits in a teaching field required for certification can be determined by referring to **Section 4**, College of Education, "Teaching Fields," located in this Bulletin.

In addition to meeting the requirements in a teaching field, a student must also take the following courses:

		<i>Credits</i>
5100:150	Introduction to Professional Education	3
5100:250	Human Development and Learning	3
5100:350	Educational Measurement and Evaluation	2
5100:450	Problems in Education	2
5300:265	Introduction to Secondary Education	1
5300:275	Exploratory Experience	1
5300:310	Principles of Teaching in the Secondary School	3
5300:325	Content Reading in Secondary School	3
5300:345	Human Relations in Secondary Education	1
5300:355	Managing Classroom Behavior at the Secondary Level	1
5300:375	Exploratory Experience	1
5300:411	Instructional Techniques Secondary Education	4
5300:445	Minicomputer Applications in Secondary Classroom	1
	or	
5300:403	Student Teaching Seminar	1
5300:455	Career Options in Secondary Education	1
5300:495	Student Teaching	8

### Minor Areas of Study

For an explanation of minor areas of study in the Buchtel College of Arts and Sciences, see **Section 5** of this Bulletin.

### Interdisciplinary and Certificate Programs of Study

For an explanation of interdisciplinary and certificate programs of study, see **Section 6** of this Bulletin.

## PROGRAMS OF INSTRUCTION

### 3100: Biology

#### Bachelor of Science

- The General Education requirement and the second year of a foreign language.
- Core requirements: All majors for a Bachelor of Science in Biology take the sequence of courses listed below, which will provide an understanding of the fundamentals of modern biology.

3100:111,2	Principles of Biology I, II	8
3100:211,2	General Genetics	4
3100:217	General Ecology	3
3100:316	Evolutionary Biology	3
3100:311	Cell Biology	3
3150:151,3,2	Principles of Chemistry I, II, and Laboratory	7
3150:154	Qualitative Analysis	2
3150:201,2	Organic Chemistry and Biochemistry I and II	8
	or	
3150:263,4,5,6	Organic Chemistry	10
3450:145	College Algebra	4
3450:149	Precalculus Mathematics	4

- A distribution requirement of one course in anatomy-physiology and two courses in organismal biology which have been approved by the department must be completed.

- A minimum of 36 credits in biology is necessary to qualify for a Bachelor of Science degree. Additional courses in biology or other sciences are usually necessary to satisfy the admission requirements of graduate and professional schools for advanced work and professional studies.

		<i>Credits</i>
• Recommended:		
3460:125	Descriptive Computer Science	2
3470:261,2	Introductory Statistics I,II	4
• A student majoring in biology or medical technology should consult a member of the biology faculty during the first year.		

### Areas of Specialization (Optional)

If a student wishes to obtain a B.S. degree with a designated Area of Specialization within Biology, the student must take the required courses listed below for that specific area. Additional courses are listed as electives that may be taken to further strengthen a student's knowledge in a particular area. The area of specialization will appear on the student's transcript.

Most of these courses will be taken during the third or fourth years:

#### Botany

Required:		
3100:342	Flora and Taxonomy	3
3100:440	Mycology	4
	or	
3100:443	Phycology	4
3100:441	Plant Development	4
	or	
3100:445	Plant Morphology	4
3100:442	Plant Anatomy	3
Electives:		
3100:440	Food Plants	2
3100:447	Plant Physiology	3
3100:448	Economic Botany	2

#### Ecology

Required:		
3100:464	General and Comparative Physiology	4
At least one of the following:		
3100:421	Tropical Field Biology	4
3100:424	Freshwater Ecology	3
3100:426	Applied Aquatic Ecology	3
At least one of the following:		
3100:342	Flora and Taxonomy	3
3100:440	Mycology	4
3100:443	Phycology	4
3100:445	Plant Morphology	4
At least one of the following:		
3100:428	Biology of Behavior	2
3100:451	General Entomology	4
3100:453	Invertebrate Zoology	4
3100:456	Ornithology	4
3100:458	Vertebrate Zoology	4

#### Microbiology

Required:		
3100:331	Microbiology	4
3100:433	Pathogenic Bacteriology	4
	or	
3100:435	Virology	4
3100:437	Immunology	4
Electives:		
3100:440	Mycology	4
	or	
3100:443	Phycology	4
3100:454	Parasitology	4
3100:481	Advanced Genetics	3
3150:401,2	Biochemistry	6

#### Animal Physiology

Required:		
3100:461,2	Human Physiology	8
3100:464	General and Comparative Physiology	4
3100:465	Advanced Cardiovascular Physiology	3
	or	
3100:469	Respiratory Physiology	3
	or	
3100:468	Reproductive Physiology	3
Electives:		
3100:365	Histology I	3
3100:401,2	Biochemistry	6
3100:466	Vertebrate Embryology	4
3100:467	Comparative Vertebrate Morphology	4
3100:484	Pharmacology	3

<b>Zoology</b>		<i>Credits</i>
Required:		
3100:428	Biology of Behavior	2
3100:453	Invertebrate Zoology	4
	or	
3100:458	Vertebrate Zoology	4
3100:464	General and Comparative Physiology	4
3100:466	Vertebrate Embryology	4
	or	
3100:467	Comparative Vertebrate Morphology	4
Electives:		
3100:365	Histology	3
3100:421	Tropical Field Biology	4
3100:451	General Entomology	4
3100:454	Parasitology	4
3100:456	Ornithology	4

### Preparation for High School Biology Teaching

For certification, additional courses in the College of Education are required. See the College of Education and the Buchtel College of Arts and Sciences "Preparation for High School Teaching," **Section 4** of this Bulletin.

- The following courses should be taken:
- |                                       |   |   |
|---------------------------------------|---|---|
| 3100:130                              | Principles of Microbiology                | 3 |
|                                       | or  |   |
| 3100:331                              | Microbiology                              | 4 |
| 3100:265                              | Introductory Human Physiology             | 4 |
| 3100:342                              | Flora and Taxonomy                        | 3 |
|                                       | or  |   |
| 3100:445                              | Plant Morphology                          | 4 |
| 3100:453                              | Invertebrate Zoology                      | 4 |
|                                       | or  |   |
| 3100:458                              | Vertebrate Zoology                        | 4 |
| Additional courses that may be taken: |   |   |
| 3100:383,4                            | Laboratory Techniques and Instrumentation | 3 |
| 3100:426                              | Applied Aquatic Ecology                   | 3 |
| 3100:428                              | Biology of Behavior                       | 2 |
| 3100:440                              | Mycology                                  | 4 |
|                                       | or  |   |
| 3100:443                              | Phycology                                 | 4 |
| 3100:464                              | General and Comparative Physiology        | 4 |

### Preparation for Professional School (Pre-medical, pre-dental, pre-veterinary and pre-pharmacy students)

- The following courses should be taken:
- |                                       |                                    |   |
|---------------------------------------|------------------------------------|---|
| 3100:461,2                            | Human Physiology                   | 8 |
|                                       | or                                 |   |
| 3100:466                              | Vertebrate Embryology              | 4 |
|                                       | and                                |   |
| 3100:467                              | Comparative Vertebrate Morphology  | 4 |
| 3470:261                              | Introductory Statistics I          | 2 |
| 3650:261,2                            | Physics for Life Sciences I and II | 8 |
| 3450:221                              | Analytical Geometry-Calculus I     | 4 |
|                                       | or                                 |   |
| 3450:215                              | Concepts of Calculus I             | 4 |
| Additional courses that may be taken: |                                    |   |
| 3100:365                              | Histology I                        | 3 |
| 3100:465                              | Advanced Cardiovascular Physiology | 3 |
| 3100:468                              | Reproductive Physiology            | 3 |
| 3100:469                              | Respiratory Physiology             | 3 |
| 3150:401,2                            | Biochemistry                       | 6 |

### Bachelor of Science in Medical Technology

- A foreign language is not required.
  - The following credits are required:
- |            |   |   |
|------------|---|---|
| 3100:111,2 | Principles of Biology I, II               | 8 |
| 3100:208,9 | Human Anatomy and Physiology              | 8 |
| 3100:211   | General Genetics                          | 3 |
| 3100:331   | Microbiology                              | 4 |
| 3100:383   | Laboratory Techniques and Instrumentation | 2 |

3100:384	Techniques and Instrumentation Laboratory	<i>Credits</i> 1
3100:433	Pathogenic Bacteriology	4
3100:437	Immunology	4
3100:454	Parasitology	4
3100:495	ST:Medical Technology	1
3150:151,3,2	Principles of Chemistry I, II and Laboratory	7
3150:154	Qualitative Analysis	2
3150:263,4	Organic Chemistry I, II	6
3150:265	Organic Chemistry Laboratory	2
3450:145	College Algebra	4
3450:149	Precalculus Mathematics	4
3460:125	Descriptive Computer Science	2

- The first three years of instruction are given in the University. The senior year consists of a minimum of 32 credits of course work in the 3120 series. These courses will be available only to the student selected for the clinical experience portion of the B.S.M.T. program in a CAHEA-approved hospital school; normal tuition will be charged. The University is affiliated with the following hospital schools: Cleveland Clinic Foundation, Cleveland Metropolitan General Hospital, Cooperative Medical Technology Program of Akron, Ohio Valley Hospital (Steubenville), University Hospitals of Cleveland and Southwest General Hospital (Middleburg Heights). The student must apply to a hospital school for separate admission. The University cannot guarantee placement. A student may train at other approved schools after obtaining special permission from the head of the Department of Biology.
- The University grants the B.S. in Medical Technology after receipt of evidence of satisfactory completion of the hospital instructional program.

### Bachelor of Science in Cytotechnology

- A foreign language is not required.
  - The following credits are required:
- |              |  |   |
|--------------|--|---|
| 3100:111,2   | Principles of Biology I, II                  | 8 |
| 3100:208,9   | Human Anatomy and Physiology                 | 8 |
| 3100:211     | General Genetics                             | 3 |
| 3100:311     | Cell Biology                                 | 3 |
| 3100:331     | Microbiology                                 | 4 |
| 3100:365,6   | Histology I, II                              | 6 |
| 3100:433     | Pathogenic Bacteriology                      | 2 |
| 3100:437     | Immunology                                   | 4 |
| 3150:151,3,2 | Principles of Chemistry I, II and Laboratory | 7 |
| 3150:154     | Qualitative Analysis                         | 2 |
| 3150:263     | Organic Chemistry I                          | 3 |
| 3150:265     | Organic Chemistry Laboratory                 | 2 |
| 3450:145     | College Algebra                              | 4 |
| 3450:149     | Precalculus Mathematics                      | 4 |

- The first three years of instruction are given at the University. The senior year consists of a maximum of 32 credits in the 3130 series. These courses are available only to the student selected for the clinical experience portion of the B.S.C.T. program in a CAHEA-approved school. Normal tuition will be charged. The student must apply for a separate admission to an approved school. The University will assist in the process but cannot guarantee admission.
- The University will grant the B.S. in Cytotechnology after receipt of satisfactory completion of the hospital instructional program.

### Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
  - At least 17 credits in the humanities or social sciences, including at least two of the following:
- |          |                            |   |
|----------|----------------------------|---|
| 3400:486 | Western Science to 1800    | 3 |
| 3400:487 | Western Science since 1800 | 3 |
| 3400:488 | Western Technology         | 3 |
| 3600:464 | Philosophy of Science      | 3 |
- At least 24 credits in the biological sciences which must include:
- |            |  |   |
|------------|--|---|
| 3100:111,2 | Principles of Biology I, II                  | 8 |
| 3100:211   | General Genetics                             | 3 |
| 3100:217   | General Ecology                              | 3 |
| 3100:311   | Cell Biology                                 | 3 |
|            | or   |   |
| 3100:130   | Principles of Microbiology (with permission) | 3 |
| 3100:316   | Evolutionary Biology                         | 3 |
- At least one year of chemistry, including, preferably, some biological chemistry (3150:129,30 General Chemistry is suggested).

## 3150: Chemistry

### Statement of Policies Admission

For students enrolled at The University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from other institutions, the following criteria must be satisfied for admission to the Department of Chemistry:

- The student must be admissible to Buchtel College of Arts and Sciences.
- Principles of Chemistry I and II, Qualitative Analysis, Organic Chemistry Lecture I, Analytical Geometry and Calculus I and II, and Elementary Classical Physics I must be completed, and the grades must have been recorded. For the Bachelor of Arts in Chemistry program, Elementary Classical Physics I may be replaced by Physics for Life Sciences I.
- A minimum grade-point average of 2.30 must be met in all university work, including transfer credits.
- A minimum grade-point average of 2.30 must be met in all chemistry coursework, including transfer credits.
- A minimum grade-point average of 2.30 must be met in all chemistry coursework on The University of Akron campus.
- A minimum grade-point average of 2.00 must be met in all work in mathematics, including transfer credits.
- A minimum grade-point average of 2.00 must be met in all work in physics, including transfer credits.

Only credits earned at an accredited institution of postsecondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in determining the above grade-point averages. Note, however, that transfer grades are never used in calculating a student's official grade-point average.

Freshman students who are admitted unconditionally to the chemistry program are exempted from the above requirements.

### Retention

Students in the chemistry programs must maintain a minimum grade-point average of 2.30 overall and a minimum of 2.30 grade-point average in chemistry courses in order to remain in good standing in the program. A student who fails to maintain the 2.30 cumulative average, including transfer credits, will be placed on academic probation. Failure to raise the average to 2.30 in a period of one semester or one 10-week summer session will result in dismissal from the program. The student may not apply for readmission for at least one semester.

A student receiving a grade below C- in a required chemistry course will be required to repeat the course.

### Graduation

The student must earn a 2.30 cumulative grade-point average in chemistry coursework on The University of Akron campus and a 2.30 cumulative grade-point average for all chemistry coursework including transfer credits.

Grades below C- obtained in any course at other institutions will not apply toward a chemistry degree at The University of Akron. Grades below C- obtained in chemistry courses will not apply toward the chemistry degree.

The student must earn a 2.30 cumulative grade-point average in all degree coursework.

### Bachelor of Science

- The General Education requirement and the second year of a foreign language.

Core Requirement:		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3150:313	Physical Chemistry Lecture I	3
3150:314	Physical Chemistry Lecture II	3
3150:380	Advanced Chemistry Laboratory I	2
3150:381	Advanced Chemistry Laboratory II	2
3150:423	Analytical Chemistry I	3
3150:424	Analytical Chemistry II	3
3150:472	Advanced Inorganic Chemistry	3
3150:480	Advanced Chemistry Laboratory III	2
3150:481	Advanced Chemistry Laboratory IV	2

At least five credits from the following:		Credits
3150:401	Biochemistry Lecture I	3
3150:402	Biochemistry Lecture II	3
3150:463	Advanced Organic Chemistry	3
3150:497	Honors Project in Chemistry (may be repeated for a total of 8 credits)	1-2
3150:498	Special Topics: Chemistry (may be repeated for a total of 8 credits)	1-2
3150:499	Research Problems (may be repeated for a total of 8 credits)	1-2
3650:481	Methods of Mathematical Physics I	3
9871:401	Introduction to Elastomers	3
9871:402	Introduction to Plastics	3
9871:407	Polymer Science	4
9871:411	Molecular Structure and Physical Properties of Polymers I	3
9871:412	Molecular Structure and Physical Properties of Polymers II	2
9871:413	Molecular Structure and Physical Properties of Polymers III	2

Subject to departmental and Graduate School approval, senior-level students may take graduate-level chemistry courses for undergraduate credit. Such courses are accepted in lieu of 400-level courses.

- Mathematics:
 

3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:235	Differential Equations	3
- Physics:
 

3650:291,2	Elementary Classical Physics I, II	8
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- Recommended:
 

3460:201	Introduction to FORTRAN Programming	3
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- Graduates of the Bachelor of Science program receive a degree certified by the American Chemical Society.

### Bachelor of Arts

- The General Education requirement and the second year of a foreign language.

Chemistry:		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3150:313	Physical Chemistry Lecture I	3
3150:314	Physical Chemistry Lecture II	3
3150:380	Advanced Chemistry Laboratory I	2
3150:423	Analytical Chemistry I	3
3150:424	Analytical Chemistry II	3

At least five credits from the following:		Credits
3150:381	Advanced Chemistry Laboratory II	2
3150:401	Biochemistry Lecture I	3
3150:402	Biochemistry Lecture II	3
3150:463	Advanced Organic Chemistry	3
3150:472	Advanced Inorganic Chemistry	3
3150:480	Advanced Chemistry Laboratory III	2
3150:481	Advanced Chemistry Laboratory IV	2
3150:497	Honors Project in Chemistry (may be repeated for a total of 8 credits)	1-2
3150:498	Special Topics: Chemistry (may be repeated for a total of 8 credits)	1-2
3150:499	Research Problems (may be repeated for a total of 8 credits)	1-2
3150:499	Research Problems	2
9871:401	Introduction to Elastomers	3
9871:402	Introduction to Plastics	3
9871:407	Polymer Science	4
9871:411	Molecular Structure and Physical Properties of Polymers I	3
9871:412	Molecular Structure and Physical Properties of Polymers II	2
9871:413	Molecular Structure and Physical Properties of Polymers III	2

- Physics:
 

3650:291,2	Elementary Classical Physics I and II or	8
3650:261,2	Physics for the Life Sciences I and II	8
- Mathematics:
 

3450:149	Precalculus Mathematics	4
3450:221,2	Analytic Geometry-Calculus I and II (or equivalent)	8
- Recommended:
 

3460:201	Introduction to FORTRAN Programming	3
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## Cooperative Education Program in Chemistry

### Qualifications

Arrangements for entry into the program are on an individual basis and are initiated by the student during the second year of undergraduate study. Full-time B.S. chemistry majors at The University of Akron must meet the following requirements:

- Satisfactory completion of 60 credits with a quality point average of at least 2.3 in chemistry courses and on schedule in their curriculum.
- Acceptance by a cooperative education coordinator or director following a series of interviews.

Part-time students must have completed 60 credits with a 2.3 average and be on schedule in their curriculum. They are expected to become full-time students while not on their co-op job.

Transfer students must have preparation equivalent to the minimum requirements for The University of Akron students and must have completed at least one semester of full-time study at The University of Akron.

Placement in an industrial or other position is not guaranteed, and foreign students should recognize that many companies require U.S. citizenship or possession of a permanent visa. In any case, final acceptance of a student for any position is the decision of the employer.

### Schedule

The work-study schedule for students in the co-op program is as follows:

Year	Fall	Spring	Summer
1	School	School	Vacation/School
2	School	School	Vacation/School/Work
3	School	Work	School
4	Work	School	Work
5	School	School	—

### Admission to Program

Interested students should attend a Cooperative Education orientation session. Students will be expected to remain with their employer for all co-op work periods in order to provide a progression of experience and responsibility. Employment must have approval of the department and the Cooperative Education director, but the University does not guarantee employment.

### Registration

Students register for Cooperative Work Periods in the same manner that a student registers for any other University courses. The course is:

3000:301	Cooperative Education
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A registration fee for each work period is charged to offset the expenses of administering the Co-op Program. Upon completion of a work period, a statement will appear on the student's official transcript listing the course number and title. In place of a grade, "credit" or "no credit" will be given, depending upon the student's satisfactory or unsatisfactory completion of the following:

- Work performance as evaluated by the employer.
- Submission of a written Work Report and its approval by the Cooperative Education staff.
- Submission of a Cooperative Work Period Summary Form.

## 3200: Classics

3200: Classics; 3210: Greek; 3220: Latin

### Bachelor of Arts

#### Classics

- The General Education requirement.

- At least 39 departmental credits including the following:

		Credits
3200:189	Mythology	3
3200:313	Archaeology of Greece	3
3200:314	Archaeology of Rome	3
3200:361	Literature of Greece	3
3200:362	Literature of Rome	3

- Two of the following courses:

3400:307	The Ancient Near East	3
3400:308	Greece	3
3400:312	Rome	3
3400:313	The Eastern Roman Empire (324-1453)	3
3400:407	Bronze Age and Archaic Greece	3
3400:408	Classical and Hellenistic Greece	3
3400:412	Roman Republic	3
3400:413	Rome Empire	3
	Electives in Classics	6

- Language credits (a minimum of four semesters of either Greek or Latin; 12 credits) must be above the 200 level in order to be included in the 39 credits. In the case of a Latin major, three credits must be taken during the senior year.
- The student wishing to be certified for public school teaching with Latin as the principal teaching field must complete the state requirements in that language.

In addition, the required credits in a second academic teaching field must be completed. See **Section 4**, College of Education, "Teaching Fields," located in this Bulletin.

#### Classical Civilization

- The General Education requirement and the second year of a foreign language.
- At least 36 department credits including the following:

3200:189	Mythology	3
3200:313	Archaeology of Greece	3
3200:314	Archaeology of Rome	3
3200:361	Literature of Greece	3
3200:362	Literature of Rome	3

One of the following courses:

3400:307	The Ancient Near East	3
3400:313	The Eastern Roman Empire	3

- One of the following groups of courses:

(A)		
3400:308	Greece	3
3400:412	The Roman Republic	3
3400:413	The Roman Empire	3

(B)		
3400:312	Rome	3
3400:407	Bronze Age and Archaic Greece	3
3400:408	Classical and Hellenistic Greece (or an approved substitute)	3
	Electives in Classics, Ancient Philosophy or Cultural Anthropology	9

It is strongly recommended that a major in classical civilization fulfill the foreign language requirement by taking two years of Greek or Latin.

## 3250: Economics

Effective Fall 1994, the Department of Economics has changed the course number for Principles of Microeconomics from 3250:202 to 3250:200. Students will be required to register for 200 before taking 3250:201 Principles of Macroeconomics. Students with prior credit for 3250:202 will be allowed to take 3250:201.

### Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 30 departmental credits including:

3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3250:400	Intermediate Macroeconomics	3
3250:410	Intermediate Microeconomics	3

- |                                      |                |
|--------------------------------------|----------------|
|                                      | <i>Credits</i> |
| • Departmental Electives             | 18             |
| • Mathematics:                       |                |
| 3450:215 Concepts of Calculus I      | 4              |
| • Statistics (one of the following): |                |
| 3470:460 Statistical Methods         | 4              |
| or                                   |                |
| 3470:461 Applied Statistics          | 4              |
| • Electives — 34 credits.            |                |

### Bachelor of Science in Labor Economics

- The General Education requirement.
- At least 30 departmental credits including:
 

3250:200 Principles of Microeconomics	3
3250:201 Principles of Macroeconomics	3
3250:330 Labor Problems	3
3250:410 Intermediate Microeconomics	3
Two of the following:	
3250:333 Labor Economics	3
3250:430 Labor Market Policy	3
3250:431 Labor and the Government	3
3250:432 Collective Bargaining	3
- Departmental Electives 12
- Mathematics:
 

3450:215 Concepts of Calculus I	4
---------------------------------	---
- Statistics (one of the following):
 

3470:460 Statistical Methods	4
or	
3470:461 Applied Statistics	4
- At least eight credits in 300/400-level courses geography, history, political science, psychology or sociology.
- Electives — 40 credits.

**Note:** 3250:100 Introduction to Economics cannot be used to satisfy the requirements for a major or minor in economics.

**Note:** Students may not receive credit for 3250:244 Introduction to Economic Analysis and 3250:200,201. Those students who have completed 3250:244 are not required to take 3250:200, 201 before beginning upper division work.

### Cooperative Education Program in Economics

#### Definition

Cooperative Education (Co-op) is an experiential program in which students work in their academic field while still in college. Students are able to learn how to apply theoretical knowledge to practical applications while being a paid employee of a business or governmental agency. While not guaranteed, many students may find their permanent post-school job as a result of their co-op experience.

#### Admission

Cooperative Education is an optional program available to all Economics students at The University of Akron. Students seeking entry into the program should attend one of the co-op orientations offered early each semester while in the second year of undergraduate study. To be eligible for placement, students must satisfactorily complete the following requirements:

- Attain admission status to the Buchtel College of Arts and Sciences in Economics.
- Undergraduate students must complete at least 45 credit hours with at least a 2.0 overall grade-point average. Graduate students are eligible for Cooperative Education and must complete 12 graduate credit hours with at least a 3.0 overall grade-point average.
- Agree to abide by the rules and regulations of cooperative education.
- Complete the orientation, all co-op registration forms and meet with a member of the Cooperative Education staff to review the availability of prospective employers. Co-op employment must be approved and coordinated by the co-op staff. The University does not guarantee employment for the student.

#### Schedule

Participating students may select between alternating and parallel options within the cooperative education program. In an alternating plan, students rotate between semesters of full-time classes and semesters of full-time work. In a par-

allel plan, students work part-time and attend classes part-time. Careful coordination with both the co-op staff and the undergraduate student advisor in Economics is imperative.

#### Registration

While no academic credits are assigned, each student must register for 3000:301 Cooperative Education in the same manner that a student registers for any other University course. See a co-op coordinator before enrolling in this course.

A cooperative program fee is charged for each work period. A statement will appear on each student's official transcript listing the course number and title. A grade of "Credit" or "No Credit" will be given, depending upon the student's satisfactory completion or unsatisfactory completion of the following:

- Work performance as evaluated by the employer.
- Written work report as approved by the cooperative education staff.
- Follow-up appointment with the cooperative education staff.

Students working on an approved cooperative education field assignment and complying with the rules and regulations of the cooperative education program are recognized as full-time students at The University of Akron. Students successfully completing three semesters of co-op experience are awarded a certificate and recognized as co-op graduates of The University of Akron.

## 3300: English

### Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 35 credits in the department including the following course and distribution requirements:

Required courses:	<i>Credits</i>
3300:301 English Literature I	4
3300:302 English Literature II	4
3300:316 Shakespeare: The Mature Plays	3
3300:341 American Literature I	3
3300:342 American Literature II	3

**Note:** The Department of English recommends that students take English Literature I before English Literature II and American Literature I before American Literature II.

#### Distribution of requirements:

One linguistics or English language course. A minimum of four 400-level courses.

Of the total number of courses taken for the major, at least two must be in literature written before 1800 and two after; 3300:301, 302, 316, 341 and 342 may not be used to meet this requirement. Courses which satisfy the language requirement and the literature before and after 1800 requirements are identified in the course descriptions.

#### Recommended:

3300:280 Poetry Appreciation	3
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- Electives — 40 credits.

## 3350: Geography and Planning

### Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 26 departmental credits including the following:

3350:310 Physical and Environmental Geography	3
3350:320 Economic Geography	3
3350:330 Rural and Urban Settlement	3
3350:340 Cartography	3
3350:341 Maps and Map Reading	3
3350:481 Geographic Research Methods	3
3350:483 Spatial Analysis	3
3350:496 Field Research Methods	3

- At least one course from the following:

3350:350 Geography of the United States and Canada	3
3350:353 Latin America	3
3350:356 Europe	3
3350:358 U.S.S.R.	3
3350:360 Asia	3
3350:363 Africa South of the Sahara	3

- Electives — 46 credits.

### Bachelor of Science in Geography/Cartography\*

- Completion in the Community and Technical College of an Applied Science degree in the surveying option of the construction technology program or the computer drafting technology program.
- Completion of General Education requirements.
- Completion of at least 47 credits of 300/400-level courses in addition to the General Studies requirement.
- At least nine credits of course work which will introduce students to a foreign culture. Such courses shall be selected by the student with the approval of the adviser in the Department of Geography and Planning. Such courses may be chosen from those foreign culture courses offered in any of the following areas: anthropology, classics, non-U.S. history and modern languages. Foreign language is strongly recommended.

• At least 30 credits in geography including the following:**		Credits
3350:442	Thematic Cartography	3
3350:444	Map Compilation and Reproduction	3
3350:447	Introduction to Remote Sensing	3
3350:448	Automated Computer Mapping	3
3350:449	Advanced Remote Sensing	3
3350:481	Geographic Research Methods	3
3350:483	Spatial Analysis	3
3350:496	Field Research Methods	3

### Bachelor of Arts in Geography/Travel and Tourism

- Completion of all requirements for the Associate Degree in the Airline/Travel Industry. Option established by the Community and Technical College.
- Completion of General Education requirements and the second year of a foreign language.
- Completion of 47 credits of 300/400 level courses.
- Completion of at least 30 credits in geography, including the following:

3350:100	Introduction to Geography	3
3350:300	Geography of Travel and Tourism	3
3350:314	Climatology	3
3350:335	Recreation Resource Planning	3
3350:341	Maps and Map Reading	3
3350:350	Geography of the U.S. and Canada	3
And at least two of the following:		
3350:353	Latin America	3
3350:356	Europe	3
3350:358	U.S.S.R.	3
3350:360	Asia	3
3350:363	Africa South of the Sahara	3

• Non-Geology Required Courses:		Credits
3150:151,2,3	Principles of Chemistry I, II	7
3450:221, 2, 3	Analytical Geometry and Calculus I, II, and III	12
3450:235	Differential Equations	3
3650:291,2	Elementary Classical Physics I and II	8
4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
4300:203	Dynamics	3
4300:313	Soil Mechanics	3
4300:314	Geotechnical Engineering	3
4600:310	Fluid Mechanics	3
	Non-Geology Electives	4

• Geology Elective List		Credits
3370:310	Geomorphology	3
3370:421	Coastal Geology	3
3370:432	Optical Mineralogy-Introductory Petrography	3
3370:435	Petroleum Geology	3
3370:436	Coal Geology	3
3370:437	Economic Geology	3
3370:449	Borehole Geophysics	3
3370:470	Geochemistry	3
3370:474	Groundwater Hydrology	3

• Non-Geology Elective List		Credits
3460:201-7	Introduction to Programming Languages (or equivalent)	2
4300:341	Hydraulic Engineering	3
4300:414	Design of Earth Structure	3
4300:445	Hydrology	3
4600:305	Thermal Science	2

### Geology

- The General Education requirement and the second year of a foreign language.
- At least 47 departmental credits including:

3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3370:230	Crystallography and Non-Silicate Mineralogy	3
3370:231	Silicate Mineralogy and Petrology	3
3370:324	Sedimentation and Stratigraphy	4
3370:350	Structural Geology	4
3370:360	Introductory Invertebrate Paleontology	4
3370:432	Optical Mineralogy-Introduction Petrography	3
3370:493	Geology Field Camp I	3
3370:494	Geology Field Camp II	3
	Elective Geology courses (300/400-level)	12

• Non-geology courses required for majors:		Credits
3150:151,2,3	Principles of Chemistry I, II	7
3450:221,2	Analytic Geometry-Calculus I and II	8
3650:291,2	Elementary Classical Physics I and II ††	8

- Electives:  
Elective credits in Field Studies (3370:495) and Research Problems (3370:499) are strongly recommended, however only 4 credits of each may be used to satisfy the geology elective requirement. Workshop (3370:490), may not be used to satisfy the geology elective requirement. Additional work in a supporting sciences, math, or engineering is encouraged. A student majoring in geology should consult regularly with the Director of Undergraduate Studies in the Geology Department.

### Geophysics

- The General Education requirement and the second year of a foreign language.
- At least 30 departmental credits including the following:

3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3370:350	Structural Geology	4
3370:441	Fundamentals of Geophysics	3
3370:446	Exploration Geophysics	3
3370:493	Geology Field Camp I	3
3370:494	Geology Field Camp II	3
	Geology Electives (as approved by geophysics adviser)	6

• Science Electives 9 credits. At least three of the following courses:		Credits
3460:201	Introduction to FORTRAN Programming or equivalent	2
3650:350	Computational Physics	3
3650:406	Waves	3
3650:431	Mechanics I	3
3650:436	Electromagnetism I	3

3650:431 and 3650:436 are strongly recommended for students planning to pursue a graduate degree in geophysics.

†† Undergraduate geology adviser may approve substitution of 3650:261,2.

## 3370: Geology

### Bachelor of Science

#### Engineering Geology

- The General Education requirement and the second year of a foreign language.
- At least 39 departmental credits including the following:

3370:101	Introductory Physical Geology	4
3370:102	Introductory History Geology	4
3370:230	Crystallography and Nonsilicate Mineralogy	3
3370:231	Silicate Mineralogy and Petrology	3
3370:301	Engineering Geology	3
3370:324	Sedimentation and Stratigraphy	4
3370:350	Structural Geology	4
3370:446	Exploration Geophysics †	3
3370:493	Geology Field Camp I	3
3370:494	Geology Field Camp II	3
	Geology Electives from List	5

\* Students planning to pursue the Bachelor of Science in Geography/Cartography should select courses 2040:242 American Urban Society and 247 Survey of Basic Economics as general electives in their C and T program.

\*\* See department head for possible substitutions.

† May also be satisfied by: 4300:418 Soil and Rock Exploration.

• Non-geology required courses:		<i>Credits</i>
3150:151.2,3	Principles of Chemistry I, II	7
3450:221.2,3	Analytic Geometry-Calculus I, II and III	12
3450:235	Differential Equations	3
3650:291.2	Elementary Classical Physics I and II	8

**Bachelor of Arts**

- The General Education requirement and the second year of a foreign language.
- At least 44 departmental credits including the following:

3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3370:231	Silicate Mineralogy and Petrology	3
3370:350	Structural Geology	4
3370:360	Introductory Invertebrate Paleontology	4
3370:493	Geology Field Camp I	3
3370:494	Geology Field Camp II	3
	Elective geology courses (minimum eight credits at the 300/400 level)	19

- Non-geology courses required for majors:

3150:151.2	Principles of Chemistry I	4
3450:149	Precalculus	4

- At least seven credits from the following:

3100:111.2	Principles of Biology (or equivalent)	4
3150:153	Principles of Chemistry II (or equivalent)	3
3650:291.2	Elementary Classical Physics I and II	4

**3400: History**

**Bachelor of Arts**

- The General Education requirement and the second year of a foreign language (French, German, Spanish or Russian suggested).
- A minimum of 32 credits in history, but up to six credits in cognate fields may be substituted with the adviser's approval. These credits must include some distribution of United States and European or non-United States history; and 3400:310, Historical Methods (taken in the sophomore or junior year). The minimum shall be 16 credits in 300/400-level history courses.
- Courses in World Civilizations and Humanities in the Western Tradition may not be used to meet major requirements in History.

**3450: Mathematics**

**Bachelor of Science**

**Bachelor of Arts**

**Mathematics**

- The General Education requirement and the second year of a foreign language.
- At least 40 departmental credits including:

3450:221.2,3	Analytic Geometry-Calculus I, II, III	12
3450:307	Fundamentals of Advanced Mathematics	3
3450:312	Linear Algebra	3
3450:411.2	Abstract Algebra I, II	6
3450:421.2	Advanced Calculus I, II	6
3450:445	Topology	7
	Math electives	7

- Complete nine credits of course work outside the major and beyond the General Studies in a suitable area of concentration as approved by the department.
- For the Bachelor of Arts degree; complete 18 credits of humanities or social sciences beyond the General Education requirement. The 18 credits are to be from more than one department.
- Electives — 17 credits.

**Applied Mathematics**

- The General Education requirement and the second year of a foreign language.
- At least 40 departmental credits including:\*

3450:221.2,3	Analytic Geometry-Calculus I, II, III	2
3450:235	Differential Equations	3
	or	
3450:335	Introduction to Ordinary Differential Equations	3
3450:307	Fundamentals of Advanced Mathematics	3
3450:312	Linear Algebra	3
3450:421.2	Advanced Calculus I, II	6
3450:427	Introduction to Numerical Analysis	3
3450:436	Mathematical Models	3
3470:461	Applied Statistics I	4
	Math electives	3

- Complete a six-credit sequence at the 300/400 level in some approved area, such as chemistry, physics, engineering, economics, etc.
- Complete nine credits of course work outside the major and beyond the General Studies in a suitable area of concentration as approved by the department. These hours may include the six-hour sequence in the applied area described.
- For the Bachelor of Arts degree: complete 18 credits in the humanities and social sciences beyond the General Studies. These 18 credits are to be from more than one department.
- Electives — 17 credits.

**Cooperative Education Program**

**Mathematical Sciences**

**Schedule**

The work-study schedule for a student participating in the Cooperative Education Program is as follows:

<i>Year</i>	<i>Fall</i>	<i>Spring</i>	<i>Summer</i>
1	School	School	Vacation/School
2	School	School	Vacation/School/Work
3	School	Work	School
4	Work	School	Work
5	School	School	—

**Admission**

Arrangements for student entry into the program are on an individual basis, and must be initiated by the student during the second year of undergraduate study. The Cooperative Education Program is an optional program available only to all full-time mathematical sciences students at The University of Akron who have satisfactorily met the following requirements:

- Sixty credits with a grade-point average of at least 2.00 out of a possible 4.00 in the program of mathematical sciences curriculum and be on schedule in the curriculum.
- Acceptance by a cooperative education coordinator or director following interviews.
- A transfer student must complete 16 credits of academic work at The University of Akron with a grade-point average of at least 2.00 out of a possible 4.00 and be on schedule in the mathematical sciences curriculum.

A student who desires to participate in the program will fill out a Personal Data form and submit it to the department head. The student will then meet with a member of the cooperative education staff to discuss the availability of prospective employers. During this interview, the student will be asked to sign a Cooperative Educational Agreement and a grade release form which will become effective upon employment. Employment must be coordinated or have approval of the department and the cooperative education director. The University does not guarantee employment for the student. The student will be expected to remain with the employer for all cooperative work periods in order to provide a progression of experience and responsibility.

**Registration**

While no academic credits are assigned, each student must register for 3000:301 Cooperative Education in the same manner that a student registers for any other University course. See department adviser before enrolling for this course.

\* The courses 3450:100, 113-138, 145, 149, 401; 3470:250-257, 260-262, 280; and most 3460 courses do not meet these degree requirements.

A cooperative program fee for each work period is charged. Upon completion of a work period, a statement will appear on each student's official transcript listing the course number, title and name of the employer. In the place of a grade, "credit" or "no credit" will be given, depending upon the student's satisfactory or unsatisfactory completion of the following:

- Work performance as evaluated by the employer.
- Written work report as approved by department head and cooperative education staff.
- Cooperative Work Period Summary form.

Usually, work progresses satisfactorily on the job and a grade of "credit" is assigned at the end of the semester. If all the above conditions are not met, a change of grade to "no credit" will be submitted.

## 3460: Computer Science

### Bachelor of Science

- The General Education requirement and the second year of a foreign language.
- Core curriculum:

		Credits
3460:209	Introduction to Computer Science	4
3460:210	Data Structures and Algorithms I	4
3460:306	Assembly Language Programming	3
3460:307	Applied Systems Programming	3
3460:316	Data Structures and Algorithms II	3
3460:330	Survey of Programming Languages	3
3460:426	Operating Systems	3
3460:430	Theory of Programming Languages	3
3460:465	Computer Organization	3

### Option I

- Other required courses:
 

3450:208	Introduction to Discrete Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3460:418	Introduction to Discrete Structures	3
3460:428	Unix System Programming	3
3470:461	Applied Statistics I	4
- Electives approved upper-level computer science courses — 12 credits.

### Option II (Business)

- Other required courses:
 

3450:208	Introduction to Discrete Mathematics	4
3450:215	Concepts of Calculus I	4
3450:216	Concepts of Calculus II	4
3460:302	Programming Applications with COBOL	3
3460:475	Database Management	3
3470:461	Applied Statistics I	4
6200:201	Accounting I	4
6200:202	Accounting II	4

Select two of the following courses:

6400:371	Business Finance	3
6500:301	Management: Principles and Concepts	3
6600:300	Marketing Principles	3

- Electives approved upper-level computer science courses nine credits.

## 3470: Statistics

### Bachelor of Arts

### Bachelor of Science

- The General Education requirement and the second year of a foreign language.
- Core curriculum:

3450:221,2,3	Analytic Geometry-Calculus I, II and III	12
3450:312	Linear Algebra	3
3470:451,2	Theoretical Statistics I, II	6
3470:461,2	Applied Statistics I, II	8

## Options

### Option I

- Other required courses:
 

		Credits
3450:421	Advanced Calculus I	3
3450:422	Advanced Calculus II	3
	Electives approved 300/400-level mathematical sciences courses	5

### Option II

- Other required courses:
 

3470:415	Mathematical Concepts for Statistics	4
3470:480	Statistical Computer Applications	3
3470:495	Statistical Consulting	2
	Electives approved 300/400-level statistical courses	2

### Option III (Actuarial Sciences BS only)

- Other required courses:
 

3450:138	Mathematics of Finance	1
3470:415	Mathematical Concepts for Statistics	4
	or	
3450:421,2	Advanced Calculus I, II	6
3470:471,2	Actuarial Science I, II	6
	Select two of the following:	
3450:427	Numerical Analysis	3
3450:428	Numerical Linear Algebra	3
3450:436	Mathematical Models	3
3470:469	Reliability Models	3
6500:421	Operations Research	3
- For the Bachelor of Science degree: complete 18 credits of course work outside the major and beyond the General Education requirement in a suitable area of concentration as approved by the department.

The recommended area of concentration for the Actuarial Sciences degree:

3250:244	Introduction to Economic Analysis	3
6200:201,2	Accounting I, II	8
6400:318	Risk Management and Insurance	3
6400:371	Business Finance	3

For the Bachelor of Arts degree: complete 18 credits of humanities or social sciences beyond the General Studies. The 18 credits are to be from more than one department.

- Electives — 13-17 credits.

## 3500: Modern Languages

3520: French; 3530: German; 3550: Italian; 3570: Russian; 3580: Spanish.

### Bachelor of Arts

#### French

- The General Education requirement.
- Completion of 27 credits above the second year (200 level): six credits in literature, six credits in culture, six credits of electives in the major language, and six credits in composition, and conversation and three credits in advanced grammar.

#### German

- The General Education requirement.
- Completion of 24 credits above the second year (200 level); six credits in literature, six credits in culture, six credits of electives in the major language and six credits in composition and conversation.

#### Spanish

- The General Education requirement.
- Completion of 28 credits above the second year (200 level); including at least one language course, one literature course, and one cultural course, all at the 400 level.

## 3600: Philosophy

### Bachelor of Arts

- The General Education requirement and the second year of a foreign language.

- A minimum of 30 departmental credits including:

		Credits
3600:101	Introduction to Philosophy	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3
3600:211	History of Ancient Philosophy	3
3600:312	History of Medieval Philosophy	3
3600:313	History of Modern Philosophy	3

(Of the additional twelve credits, six must be earned in 300/400-level courses.)

- Electives — 45 credits.

## 3650: Physics

### Bachelor of Science

This degree is intended for the student seeking the most detailed and quantitative preparation in physics available in an undergraduate curriculum.

- The General Education requirement and the second year of a foreign language.

- Physics requirements:<sup>†</sup>

A minimum of 40 credits at 200 level or higher, including:<sup>†</sup>

3650:291.2	Elementary Classical Physics I and II	8
3650:301	Elementary Modern Physics	3
3650:322.3	Intermediate Laboratory I, II	4
3650:340	Thermal Physics	3
3650:431	Mechanics I	3
3650:436	Electromagnetism I	3
3650:441	Quantum Physics I	3
	Physics Electives	13

Highly recommended courses for all students:

3650:432	Mechanics II	3
3650:437	Electromagnetism II	3
3650:442	Quantum Physics II	3
3650:451.2	Advanced Laboratory I, II	4
3650:481.2	Methods of Mathematical Physics I, II	6
	Mathematics:	
3450:221.2,3	Analytic Geometry-Calculus I, II and III	12
3450:235	Differential Equations	3

- Chemistry requirements:

3150:132.3	Principles of Chemistry I, II	7
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- Computer Science requirement:

3460:201	Introduction to FORTRAN Programming	2
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The following courses are recommended for students wishing to enhance their program of study in Physics:

- Chemical Physics

A suggested program of 20 credits to include the following:

3150:263.4	Organic Chemistry	6
3150:313.4	Physical Chemistry Lecture I, II	6
3150:423.4	Analytical Chemistry I, II	6
3150:381	Advanced Chemistry Lab	2

- Polymer Physics

A suggested program of 24 credits to include the following:

3150:263.4	Organic Chemistry	6
3150:313.4	Physical Chemistry Lecture I, II	6
9871:401	Introduction to Elastomers	2
9871:402	Introduction to Plastics	2
9871:411.2,3	Molecular Structure and Physical Properties of Polymers I, II, III	7

- Physics (Pre-Graduate School)

A suggested program of 34 credits to include the following:

		Credits
3650:320	Optics	3
3650:432	Mechanics II	3
3650:437	Electromagnetism II	3
3650:438	Methods of Applied Physics	3
3650:481.2	Methods of Mathematical Physics I, II	6
3650:399	Undergraduate Research	1-6
3650:442	Quantum Physics II	3
3650:451.2	Advanced Laboratory I, II	4

The preceding requirements specify the minimum curriculum for the B.S. in physics. The student expecting to specialize in a particular professional area should consider utilizing part or all elective courses toward one of the important program areas of specialization listed above. These programs are intended to be illustrative only; considerable flexibility is possible, depending upon the needs and interests of the individual student.

The physics student may consider it important in the bachelor's degree programs to prepare in greater depth in other science areas (besides physics and mathematics) than may usually be possible within the traditional four-year departmental degree curricula.

### Cooperative Industrial Employment Plan

For the academically qualified undergraduate student majoring in physics, an optional cooperative plan is available which provides a scheduled sequence of professionally oriented industrial employment (totaling a full calendar year) alternating with periods of on-campus classroom instruction. This cooperative plan requires a five-year period for the completion of the bachelor's degree program in physics, with the spring term of the third year plus the fall and summer terms of the fourth year typically spent off campus with a participating industrial employer.

Arrangements are made on an individual basis and must be initiated by the student during the second year of undergraduate study. For further information, contact the department.

## 3700: Political Science

### Statement of Policies - Admission

For students enrolled at The University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from other institutions, the following criteria must be satisfied for admission to the Department of Political Science:

- The student must be admissible to Buchtel College of Arts and Sciences.
- A minimum grade point average of 2.20 must be met in all university work, including transfer credits.
- A minimum grade point average of 2.20 must be met in all work in Political Science, including transfer credits.

Only credits earned at an accredited institution of postsecondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.

### Retention

Students in the Political Science programs must maintain a minimum grade point average of 2.20 overall and a minimum of 2.20 grade point average in Political Science courses in order to remain in the program. A student who fails to maintain the 2.20 cumulative average will be placed on academic probation. Failure to raise the average after one semester or one 10 week summer session will result in dismissal from the program. The student may not apply for readmission for at least one semester.

The department will limit the student's ability to withdraw from a course to the first eight weeks of the semester. No course may be repeated for a grade change more than once.

### Graduation

A Political Science major must earn a cumulative 2.20 grade point average in Political Science and overall to graduate with such a declared major.

Grades of C- or below obtained in any course at other institutions will not apply toward a Political Science degree at The University of Akron.

<sup>†</sup> Additional physics courses are usually necessary to satisfy the admission requirements of graduate schools for advanced work in physics or certain other physical sciences.

<sup>‡</sup> Only one of the introductory sequences 291.2 or 261.2 is applicable toward the required 40 credits. Courses 1100:224, 3650:130, 133, 137, 138, and 160 are not applicable toward the required 40 credits of physics courses without special permission.

**Bachelor of Arts**

- The General Education requirement and the second year of a foreign language.
- Completion of at least 30 credits in the department. Students must select one of the following two tracks:

**American Track**

	Credits
3700:100 Government and Politics in the United States	4
3700:201 Introduction to Political Research	3
3700:300 Comparative Politics	4
3700:303 Introduction to Political Thought	3
3700:310 International Politics and Institutions	4

And two 400-level courses (may include 400-level course used to meet the American politics requirement).

- Choose one American politics course from among the following:
- |   |   |
|---|---|
| 3700:341 American Congress                                  | 3 |
| 3700:350 American Presidency                                | 3 |
| 3700:360 Judicial Process                                   | 3 |
| 3700:402 Politics and the Media                             | 3 |
| 3700:474 Political Opinion, Behavior and Electoral Politics | 3 |
| 3700:475 American Interest Groups                           | 3 |
| 3700:476 American Political Parties                         | 3 |

- Additional Political Science electives to equal 30 credits total in Political Science.

**International/Comparative Track**

3700:150 World Politics and Governments	3
3700:201 Introduction to Political Research	3
3700:300 Comparative Politics	4
or	
3700:310 International Politics and Institutions	4
3700:303 Introduction to Political Thought	3

And two 400-level courses (may include 400-level course used to meet the American politics requirement).

- Choose TWO American politics courses from among the following:
- |   |   |
|---|---|
| 3700:341 American Congress                                  | 3 |
| 3700:350 American Presidency                                | 3 |
| 3700:360 Judicial Process                                   | 3 |
| 3700:402 Politics and the Media                             | 3 |
| 3700:474 Political Opinion, Behavior and Electoral Politics | 3 |
| 3700:475 American Interest Groups                           | 3 |
| 3700:476 American Political Parties                         | 3 |

- Additional Political Science electives to equal 30 credits total in Political Science.

**Bachelor of Science in Political Science/  
Criminal Justice**

- Completion of all requirements for the associate degree in criminal justice technology established by the Community and Technical College.
- Completion of General Education requirement requirements.
- Completion of 47 credits of 300/400-level courses.
- At least six credits of course work which will introduce the student to a foreign culture. Such courses shall be selected by the student with the approval of the adviser in the Department of Political Science. Courses may be chosen from any of the following departments: modern languages, history, political science, anthropology and geography.
- At least 30 departmental credits including:

3700:100 Government and Politics in the United States	4
3700:201 Introduction to Political Research	3
3700:361 Politics of the Criminal Justice System	3
3700:370 Public Administration: Concepts and Practices	4
3700:380 Urban Politics and Policies	4
3700:395 Internship in Government and Politics	2-3
or	
3000:301 Cooperative Education	0
3700:462 The Supreme Court and Civil Liberties	3
3700:480 Policy Problems: Criminal Justice	3

- One upper division American politics course from among the following:

3700:341 The American Congress	3
3700:350 The American Presidency	3
3700:360 The Judicial Process	3
3700:402 Politics and the Media	3
3700:472 American Interest Groups	3
3700:473 American Political Parties	3

**Bachelor of Science in Political Science/  
Public Policy Management**

- The General Education requirement and the second year of a foreign language.
- Completion of 47 credits of 300/400 level courses

• Political Science:

	Credits
3700:100 Government and Politics in the United States	4
3700:201 Introduction to Political Research	3
3700:395 Internship: Government and Politics	3
or	
Co-op Collegewide Level	0

Choose three of the following Policy-Related Options:

3700:301 Advanced Political Research	3
3700:370 Public Administration: Concepts and Practices	4
3700:441 Policy Process	3
3700:442 Methods of Policy Analysis	3
3700:480 Policy Problems	3

Two 3700:400-level courses (may include 400-level courses used to meet policy-related option) Political Science electives

- Accounting:
 

6200:490 Special Topics: Financial Management for Non-Profit Organizations	3
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- Computer Science:
 

3460:126 Introduction to Basic Programming	2
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- Economics:
 

3250:200 Principles of Microeconomics	3
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- Statistics:
 

3470:260 Basic Statistics	3
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- Psychology:
 

3750:100 Introduction to Psychology	3
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- Management:
 

6500:301 Management: Principles and Concepts	3
6500:323 Computer Applications for Business	3
6500:341 Human Resource Management	3
- Choose one of the following Choice Options:
 

3250:330 Labor Problems	3
3250:405 Economics of the Public Sector	3

**Special Curricular Tracks in Political Science**

The department offers three special tracks for the student interested in pre-law, the international service or national, state or local government service. In addition to the requirements for the major, each of these tracks includes electives appropriate for preparation for careers in law, government service or international service.

Information about these curricular tracks may be obtained from the head of the department.

**3750: Psychology**

**Bachelor of Arts**

The General Education requirement and a minimum of 40 credits in psychology including:

- 12 credits of core requirements:
 

3750:100 Introduction to Psychology	3
3750:105 Professional and Career Issues in Psychology	1
3750:110 Quantitative Methods in Psychology	4
3750:220 Introduction to Experimental Psychology	4
- 16 credits from one of the following options:

**Pregraduate School**

This option is intended for students who intend to pursue graduate studies in psychology or related fields. This option requires completion of the second year of a foreign language.

3750:320 Biopsychology	4
3750:335 Dynamics of Personality	4

3750:340	Social Psychology	Credits	4
3750:345	Cognitive Processes		4

3850:403	History of Sociological Thought	Credits	3
3850:404	Contemporary Sociological Theories		3
3850:430	Juvenile Delinquency		3
3850:433	Sociology of Deviant Behavior		3
3850:441	Sociology of Law		3
3850:495	Research Internship		2

**Human Services and Human Resources**

This option is intended for students who intend to train for psychology technician positions in human services (counseling or developmental psychology) or human resources (personnel). This option requires completion of the second year of a foreign language or a similar level of proficiency in American Sign Language.

3750:230	Developmental Psychology	4
	or	
3750:240	Industrial/Organizational Psychology	4
3750:335	Dynamics of Personality	4
	or	
3750:340	Social Psychology	4
	and	
3750:410	Psychological Tests and Measurements	4
3750:495	Field Experience in Psychology	4

- Psychology Electives — 12

**3850: Sociology**

(3850: Sociology; Sociology/Law Enforcement; Sociology/Corrections; 3870: Anthropology)

**Bachelor of Arts in Sociology**

- The General Education requirement and the second year of a foreign language.
- A minimum of 30 credits in sociology including:

3850:100	Introduction to Sociology	4
3850:301,2	Methods of Social Research I and II	6
3850:403	History of Sociological Thought	3
3850:404	Contemporary Sociological Theories	3
	Sociology Electives	14

(3870:150 Cultural Anthropology can be counted as part of these credits)

- Electives

The student should consult with a departmental adviser about using electives to enhance the specialty area, e.g., academic sociology, deviance and corrections, family, agency and life cycle, urban planning and social research.

**Bachelor of Arts in Sociology/Anthropology**

- The General Education requirement and the second year of a foreign language.
- Minimum of 35 credits in the department to include:

3850:100	Introduction to Sociology	4
3850:302	Methods of Social Research II	3
3850:403	History of Sociological Thought	3
3870:150	Cultural Anthropology	4
3870:151	Evolution of Man and Culture	3
3870:356	Archaeology of the Americas	3
3870:461	Language and Culture	3
3870:405	History and Theory in Anthropology	3

- A minimum of nine additional credits to be selected from the following courses:

3870:270	Cultures of the World	3
3870:355	Indians of South America	3
3870:357	Magic, Myth and Religion	3
3870:358	Indians of North America	3
3870:397	Anthropological Research	3
3870:455	Culture and Personality	3
3870:457	Culture and Medicine	3
3870:463	Social Anthropology	3
3870:472	Special Topics: Anthropology	3

- Electives

**Bachelor of Arts in Sociology/Law Enforcement**

- The General Education requirement and the second year of foreign language.
- A minimum of 33 credits in the department including:

3850:100	Introduction to Sociology	4
3850:301,2	Methods of Social Research I, II	6
3850:320	Social Inequality	3
3850:330	Criminology	3

- Electives

Students who enter the Sociology/Law Enforcement program from the University College, or by transfer, must complete course work in the Criminal Justice Technology program. This may be done in one of two ways: (1) complete the program requirements for an A.S. in criminal justice; or, (2) complete 18 credits of criminal justice technology course work, plus 2250:260 Administration and Supervision in the Public Service. The appropriate course work will be determined by the student's sociology/law enforcement adviser.

**Bachelor of Arts in Sociology/Corrections**

- The General Education requirement and the second year of a foreign language.
- A minimum of 33 credits in sociology including:

3850:100	Introduction to Sociology	4
3850:301,2	Methods of Social Research I, II	6
3850:315	Sociological Social Psychology	3
	or	
3850:411	Social Interaction	3
	or	
3850:412	Socialization: Child-Adult	3
3850:330	Criminology	3
3850:403	History of Sociological Thought	3
3850:404	Contemporary Sociological Theories	3
3850:429	Probation and Parole	3
3850:430	Juvenile Delinquency	3
3850:431	Corrections	3
3850:495	Research Internship	2

- Electives

Students who enter the Sociology/Corrections program from the University College, or by transfer, must complete course work in the Criminal Justice Technology program. This may be done in one of two ways: (1) complete the program requirements for an A.S. in criminal justice; or, (2) complete 18 credits of criminal justice technology course work, plus 2250:260 Administration and Supervision in the Public Service. The appropriate course work will be determined by the student's sociology/corrections adviser.

**Division Majors**

**Humanities**

The humanities division consists of the departments of classics, English, modern languages and philosophy. The disciplines of history and the creative and dramatic arts (art, music, theatre arts) are included. The divisional major must include the following:

- The General Education requirement and the second year of a foreign language.
- A minimum of 54 credits, at least 24 of which must be in courses at the 300/400 level. The 54 credits must include 18 credits in each of any three of the following six fields: classics, English, history, modern languages, philosophy and the creative and dramatic arts.
- The first two years of any language in either classics or modern languages will not be included in the 18-credit requirement for those disciplines.

By field, the 18-credit requirement must include:

• Classics:		
	3200:361	The Literature of Greece
	3200:362	The Literature of Rome
	3200:189	Classical Mythology
		3
• English:		
	300/400 level, including at least two courses at the 400 level (minimum)	9
• History:		
	300/400 level (minimum)	10

- Modern Languages: Credits
  - Composition and Conversation 6
  - Literature 6
  - Any combination of linguistics and culture-civilization 6
- Philosophy:
  - 3600:101 Introduction to Philosophy 3
  - 3600:120 Introduction to Ethics 3
  - 3600:170 Introduction to Logic 3
- Creative and Dramatic Arts:
  - Non-performance courses in art (7100), music (7500) and theatre arts (7800) 18

Courses for the humanities division major must be selected with the approval of the division adviser. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

### Natural Sciences

The divisional major provides for a broad background in science with concentration in selected areas. It is an appropriate major for those preparing for admission to professional programs in medicine, dentistry or veterinary science or for those desiring a Liberal Arts degree with a general emphasis in science. Additional course work is often necessary for those planning graduate studies in a particular science discipline. The natural sciences division consists of the departments of biology, chemistry, geology, mathematical sciences, physics and polymer science. The divisional major must include:

- The General Education requirement.
- 47 credits at the 300-400 level.
- A minimum of 64 credits in the division and/or engineering, at least 27 of which must be in divisional courses at the 300/400 level.
- At least 27 credits from one of the departments of the natural sciences division.
- At least 16 credits with at least two credits at the 300/400 level from another of the following disciplines: biology, chemistry, engineering, geology, mathematics or computer science or statistics, physics, polymer science.
- At least 16 credits from a third of these disciplines; or alternatively, at least eight credits in each of two other of these disciplines.
- A foreign language is strongly recommended.

The courses for the natural sciences division major must be selected from those courses approved by the department offering the course. In general, only courses available toward the major are acceptable. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

### Social Sciences

The social sciences division consists of the departments of economics, geography, history, political science, psychology, sociology and urban studies(graduate program only). The divisional major must include the following:

- The General Education requirement and the second year of a foreign language.
- A minimum of 54 credits, at least 24 of which must be in courses at the 300/400 level. The 54 credits must include a minimum of 15 credits in each of any three of the following six fields: economics, geography, history, political science, psychology and sociology-anthropology.

By field, the 15-credit requirement must include:

- Economics: 15
  - Any except 3250:100 Introduction to Economics\* (must include 3250:200 Principles of Microeconomics and 3250:201 Principles of Macroeconomics)
- Geography: 15
- History: 15
  - At least seven of the 15 credits at the 300/400 level
- Political Science: 15
  - At least seven of the 15 credits at the 300/400 level
  - 3700:100 Government and Politics in the United States 4
  - or
  - 3700:201 Introduction to Political Research 3

\* Course will not apply toward 54 credits in the major.

Each student shall take at least one course in two of the four areas (American government and politics, comparative politics, international politics and political theory) shown below:

<b>American Government and Politics:</b>		Credits
3700:210	State and Local Government and Politics	3
3700:341	The American Congress	3
3700:342	Minority Group Politics	3
3700:350	The American Presidency	3
3700:360	The Judicial Process	3
3700:370	Public Administration: Concepts and Practices	4
3700:380	Urban Politics and Policies	4
3700:381	State Politics	3
3700:402	Politics and the Media	3
3700:440	Survey Research Methods	3
3700:441	The Policy Process	3
3700:461	The Supreme Court and Constitutional Law	3
3700:462	The Supreme Court and Civil Liberties	3
3700:480	Policy Problems	3

<b>Comparative Politics:</b>		Credits
3700:300	Comparative Politics	4
3700:320	Britain and the Commonwealth	3
3700:321	Western Europe Politics	3
3700:322	Soviet and East European Politics	3
3700:323	Politics of China and Japan	3
3700:326	Politics of Developing Nations	3
3700:327	African Politics	3
3700:420	Issues and Approaches in Comparative Politics	3
3700:425	Latin American Politics	3

<b>International Politics:</b>		Credits
3700:220	American Foreign Policy	3
3700:310	International Politics and Institutions	4
3700:415	Comparative Foreign Policy	3

<b>Political Theory:</b>		Credits
3700:302	American Political Ideas	3
3700:303	Introduction to Political Thought	3
3700:304	Modern Political Thought	3

- Psychology: 15
- Sociology-Anthropology: 15

Courses for the social sciences division major must be selected with the approval of the divisional adviser. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

## Bachelor of Science/Doctor of Medicine Degree (B.S./M.D. Program)

### Introduction

The Northeastern Ohio Universities College of Medicine (NEOUCOM), in conjunction with its consortium universities, offers a six-year B.S./M.D. program. Each year The University of Akron admits a limited number of carefully selected students into its B.S./M.D. degree option. The deadline for application to the program is December 31.

Students selected for the program enter Phase I, the B.S. degree phase, where they may obtain the baccalaureate degree in two years on the Akron campus(summers included). Phase I students who successfully complete coursework requirements, maintain required grade point averages, achieve required scores on the Medical College Admission Test, and meet all other standards of readiness for medical education are then promoted directly to NEOUCOM for Phase II of the B.S./M.D. program. Phase II consists of a four-year medical school course of study, at the NEOUCOM campus and at selected clinical campuses, leading to the M.D. degree.

During Phase I, B.S./M.D. students usually pursue a natural sciences division major in the Buchtel College of Arts and Sciences, although other majors may be selected with the approval of the B.S./M.D. Program Coordinator. B.S./M.D. students are eligible for participation in the University Honors Program. Curricula for both options are listed below.

B.S./M.D. students pursuing either the regular or honors track may also complete a certificate in Gerontology by fulfilling requirements from courses available from the Institute for Life-Span Development and Gerontology and the Office of Geriatric Medicine, NEOUCOM. Application is made through the Institute for Life-Span Development and Gerontology.

**Requirements**

**Group I: 15 hours**

• Required:			
1880:310	Humanities in Medical Education		3
• Remaining 12 credits from among the following:			
	Classics (3200)		
	Greek (3210)		
	Latin (3220)		
	English (3300)		
	History (3400)		
	Philosophy (3600)		
	Humanities in the Western Tradition I, II (3400:210,211)		
	World Civilizations (3400:385-391)		

**Group II: 13 hours**

• Required:			
7600:105	Introduction to Public Speaking or		3
7600:106	Effective Oral Communication		3
3300:111	English Composition I Honors		4
3300:112	English Composition II Honors or		3
	Other approved writing class		3-4
• Remaining credits from among the following:			
	Modern Languages (3520-3580 300 level or above)		
	Art (7100)		
	Music (7500)		
	Applied Music (7520)		
	Theatre Arts (7800)		
	Dance (7900)		

**Group III: 9 hours**

• Required:			
3750:100	Introduction to Psychology		3
• Remaining six credits from among the following:			
	Economics (3250)		
	Geography (3350)		
	Political Science (3700)		
	Psychology (3750)		
	Sociology (3850)		
	Anthropology (3870)		

**Group IV: 68 hours (satisfies requirement for Natural Sciences major).\*** **Divisional**

• Required:			
<b>Mathematics</b>			
3450:221	Analytical Geometry Calculus I		4
3460:125	Descriptive Computer Science		2
3470:261,2	Introductory Statistics I, II		4
<b>Biology</b>			
3100:111,112	Principles of Biology I, II		8
3100:211	Genetics		3
3100:461,2	Human Physiology		8
3100:365	Histology (plus 5 additional biology 300/400 credits—may be transferred from NEOUCOM)		3
<b>Chemistry</b>			
3150:151,153	Principles of Chemistry I, II		6
3150:152	Principles of Chemistry I Laboratory		1
3150:154	Qualitative Analysis		2
3150:263,264	Organic Chemistry I, II		6
3150:265	Organic Chemistry Lab		2
3150:401,402	Biochemistry I, II		6
<b>Physics</b>			
3650:261,262	Physics for Life Sciences		8

**Free Electives: 14 hours**

Free electives may be selected from any departments except mathematical sciences (3450, 3460, 3470) and sciences (3100, 3150, 3370, 3650). Credits earned in excess of requirements for any Group I-III may be applied toward this free elective requirement. (May be taken on credit/noncredit basis.)

**Specific B.S./M.D. Program Requirements: 10 hours**

			<i>Credits</i>
2780:290	CPR		2
3100:190,191	Health Care Delivery Systems		2
3100:290,291	Health Care Delivery Systems		2
1880:201	Medical Seminar and Practicum I		3
	Physical Education Requirement:		
5540:120-181	Physical Education		1

**B.S./M.D. Honors Track**

Students accepted into the NEOUCOM B.S./M.D. program are also eligible to enroll in the University Honors Program. This opportunity will encourage capable students to broaden their intellectual horizons, to strive for academic excellence, and to develop respect and appreciation for superior intellectual achievement.

The B.S./M.D. Program Coordinator will serve as the Honors Preceptor for the B.S./M.D. students. Other faculty will become involved as each student plans the honors project. Requirements for retention in the Honors Program are determined by the Honors Council.

**Honors Requirements:**

Colloquia: <sup>†</sup>			
1870:250	Honors Colloquium Humanities		2
1870:360	Honors Colloquium Social Sciences		2
	Honors Project:		3

A major research paper will be required. A University of Akron faculty member shall direct the paper. The work must be completed prior to the completion of the undergraduate degree. In any of the following options, each student is expected to file the formal paper with the department of choice and the Honors Council in compliance with the procedures established by the Honors Council. Three options are possible:

- 1) A student may register for three hours of regular honors project hours in any department currently offering such credit. The student would be expected to complete a major research paper which in some way relates medicine to the discipline of the department.
- 2) A student may complete a research laboratory project in biology during the first summer of medical school. A formal paper, directed by a University of Akron faculty member, will be submitted as partial completion of the honors requirements.
- 3) A student may complete a major paper as part of the Human Values in Medicine curriculum at NEOUCOM and transfer up to three hours of credit back to The University of Akron. A University of Akron faculty member should act as codirector of the project.

- B.S./M.D. Honor students will be encouraged to enroll in honors sections whenever possible but honors work in the divisional major will not be required. In the exceptional case, a nonhonors section of English Composition may be approved.
- Students who withdraw from the B.S./M.D. program who are otherwise eligible to continue in the Honors Program may remain in the Honors Program under current requirements.
- Students who withdraw or are no longer eligible to remain in the Honors Program may continue in the B.S./M.D. program provided they meet current B.S./M.D. requirements. Their General Studies requirement will be met by satisfying B.S./M.D. Honors Groups I through III plus three credits of math, six credits of science, and physical education.

\* The College requirement of 47 upper level credits is waived for B.S./M.D. students promoted to Phase II in two years. Those who leave the program or take a third year must satisfy this requirement. See adviser for clarification.

† These seven credits will substitute for seven of the required free elective credits.

# College of Engineering

Irving F. Miller, Ph.D., *Dean*

Max S. Willis, Jr., Ph.D., *Associate Dean, Research and Graduate Studies*

Paul C. Lam, Ph.D., *Associate Dean, Undergraduate Studies and Minority Affairs*

Richard Rice, *Assistant Dean, Director of Engineering Cooperative Education Program*

Dorothy McCubbrey, Ph.D., *Director of Women in Engineering Program*

## OBJECTIVES

The purpose of the College of Engineering is to further the objectives of the University by providing an excellent program of engineering education with the following objectives:

- To provide an excellent engineering education.
- To provide opportunities for research and scholarship to advance the frontiers of technology.
- To provide graduates with knowledge to facilitate economic and technological progress of society.
- To promote a strong sense of ethics and professionalism.

The college offers programs leading to the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees.

At the undergraduate level the college offers a five-year cooperative educational program as well as the traditional four-year degree program. A majority of the students elect the cooperative program which provides three semesters of valuable practical experience.

The emphasis in the undergraduate programs is on the preparation of students for professional practice, and University policy assures that each student obtains a substantial exposure to the humanities and social sciences.

A graduate is prepared for employment in the engineering profession or graduate studies in engineering upon receipt of the baccalaureate degree.

## COLLEGE REQUIREMENTS

### Cooperative Program

The optional cooperative program provides for a coordinated sequence of alternate periods of classroom instruction and employment during the five-year program.

The cooperative program simultaneously provides for the development of fundamental principles in the classroom and for their application in practice. The student has the opportunity to find the type of work and organization in which the student can best apply individual ability. The student gains an appreciation of the problems of labor and management by first-hand experience. The student develops mature judgment by coping with the everyday problems. The employer of a cooperative student has the ability to train and select a student whose abilities and aptitudes can be adapted to the needs of technical staff requirements.

While a student is at work, all rules and regulations prescribed by the employer must be obeyed. In addition, the student is subject to all current labor laws and conditions. The student is considered a full-time student by the University while in industrial assignments.

The University does not guarantee employment, but makes every effort to place a student to the best financial advantage that is consistent with the acquisition of sound preprofessional experience.

## Admission

To be admitted to the college, the student must have **a)** completed 30 credits of coursework; **b)** completed the second course of Analytic Geometry-Calculus; and **c)** received "C" or better in all required math courses that were attempted less than three times, or at least a "B" for any such course attempted a third time. The student must have no more than three grades for any one course and no more than six "repeats for change of grade." The student must have a 2.3 grade-point average in three of the four following areas: overall, engineering, math, and science.

## Degrees

The college offers curricula leading to the degrees of Bachelor of Science in chemical, civil, electrical and mechanical engineering; Bachelor of Science in Engineering; and Bachelor of Construction Technology.

## Requirements for Graduation

- Compliance with University requirements, Section 3, of this Bulletin.
- Completion of the requirements in the appropriate list of courses and a minimum of 137 credits of course work.
- Recommendation of the student's department.
- Achievement of 2.0 grade point average in all Engineering coursework attempted (4xxx prefix courses).

## PROGRAMS OF INSTRUCTION

### 4200: Chemical Engineering

The goal of chemical engineering education is the development of the student's intellectual capacity and ability to apply the principles of transport phenomena, thermodynamics, and chemical reaction kinetics to the creative resolution of technological problems.

The chemical engineer, like all other engineers, is trained in mechanics, materials, economics, systems, and controls. The chemical engineer differs from all other engineers because the chemical engineer is responsible for materials separations such as air into components of oxygen, nitrogen, argon; and conversion of matter such as natural gas into plastics and coal into liquid fuel.

The chemical engineer finds careers in the chemical process industries, usually becoming involved with inorganic and organic chemicals, rubber, polymers, detergents, petroleum products, metals, pharmaceuticals, biochemical, and food products. The chemical engineer will usually be employed in one or more of the following activities: research and development, plant design and construction, process control, plant operations, sales and management. In addition to the processing industries, the chemical engineer is increasingly in demand in such areas of current interest as management of environment, biotechnology, and energy engineering.

Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

		Credits
• General Education — 30 credits.		
• Natural science:		
3150:151,3	Principles of Chemistry I, II	7
3150:154	Qualitative Analysis	2
3450:221,2,3	Analytic Geometry-Calculus I, II, III	12
3450:235	Differential Equations	3
3450:—	Advanced Mathematics Elective	2
3650:291,2	Elementary Classical Physics I, II	8
• Advanced chemistry:		
3150:263,4	Organic Chemistry I, II	6
3150:265	Organic Chemistry Laboratory	2
3150:313,4	Physical Chemistry I, II	6
• Engineering core:		
4100:101	Tools for Engineering	3
4200:121	Chemical Engineering Computations	2
4200:305	Materials Science	2
4300:201	Statics	3
4400:320	Basic Electrical Engineering	4

• Chemical engineering:		Credits
4200:200	Material and Energy Balances	4
4200:225	Equilibrium Thermodynamics	4
4200:321	Transport Phenomena I	3
4200:322	Transport Phenomena II	3
4200:330	Chemical Reaction Engineering	3
4200:351	Fluid and Thermal Operations	3
4200:352	Transport Laboratory	2
4200:353	Mass Transfer Operations	3
4200:435	Process Analysis and Control	3
4200:441	Process Economics and Design	4
4200:442	Plant Design	4
4200:454	Operations Laboratory	1
• Electives:		
	Advanced Chemistry or Polymer Science	3
	Engineering Design (two courses)	6

## 4300: Civil Engineering

Civil engineers plan, design, and build the infrastructure of modern society. This includes highways, bridges, large buildings, power plants, industrial facilities, tunnels, seaports, airports, offshore structures and almost anything else needed as the basis for modern life. Civil engineers are also vigorously engaged in environmental activities, creating safe water supplies and moving water where it is needed, treating waste water, cleaning up environmental problems, and insuring the safe disposal of solid waste.

Most civil engineering graduates work for design consultants, construction companies, or government bodies at all levels. Others work for industrial firms and utilities. Many civil engineering graduates own their own businesses.

The civil engineering curriculum at The University of Akron insures a firm grounding in all areas of civil engineering, while allowing specialization if desired in the environmental, geotechnical, transportation, structures, and water resources subareas.

• Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.		
• General Education — 30 credits.		
• Natural science:		
3150:151,3	Principles of Chemistry I, II	7
3370:101	Introductory Physical Geology	4
3450:221,2,3	Analytic Geometry-Calculus I, II, III	12
3450:235	Differential Equations	3
3470:461	Applied Statistics	4
3650:291,2	Elementary Classical Physics I, II	8
• Engineering core:		
4100:101	Tools for Engineering	3
4200:305	Materials Science	2
4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
4400:320	Basic Electrical Engineering	4
4600:203	Dynamics	3
4600:305	Thermal Science	2
4600:310	Fluid Mechanics	3
• Civil engineering:		
4300:230	Surveying	3
4300:306	Theory of Structures	3
4300:313	Soil Mechanics	3
4300:314	Geotechnical Engineering	3
4300:323	Water Supply and Wastewater Disposal	4
4300:341	Hydraulics	3
4300:361	Transportation Engineering	3
4300:380	Engineering Materials Laboratory	2
4300:401	Steel Design	3
4300:403	Reinforced Concrete Design	3
4300:448	Hydraulics Laboratory	1
4300:471	Construction Administration	3
4300:	Water Area Course	3
• Electives:		
	Technical Electives	9

## 4400: Electrical Engineering

The many branches of electrical engineering include: production and distribution of electrical energy; research, development, manufacture and operation of electrical and electronic products; and systems for instrumentation, automation, tracking and telemetry.

The growth of electronic research and manufacturing has been accelerated by the space age. There is hardly a segment of the economy which has not been influenced by electronics. The high speed digital computer has found its way into virtually all aspects of modern life. A student wishing to specialize in computer engineering will find appropriate electives available.

The wide use of electrical means for measurement, control and computation has resulted in the need for electrical engineers in all types of industries. Varied employment opportunities are available.

A student wishing to continue education in graduate school, law school or medical school will find specialized programs of preparation are available within the framework of the Department of Electrical Engineering.

Accredited by the Engineering Accreditation Commission of the Accreditation Board For Engineering and Technology

• General Education — 30 credits.		
• Natural science:		Credits
3150:151,3	Principles of Chemistry I, II	7
3450:221,2,3	Analytic Geometry-Calculus I, II, III	2
3450:235	Differential Equations	3
3450:	Mathematics Elective	2
3650:291,2	Elementary Classical Physics I, II	8
3650:301	Elementary Modern Physics	3
• Engineering core:		
4100:101	Tools for Engineering	3
4200:305	Materials Science	2
4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
	or	
4600:203	Dynamics	3
4450:208	Programming for Engineers	3
4600:305	Thermal Science	2
• Electrical engineering:		
4400:231,2	Circuits I, II	6
4400:243	Signal Analysis	3
4400:333	Discrete-Time Systems	3
4400:340	Electric Circuits Laboratory	1
4400:353	Electromagnetic Fields I	4
4400:354	Electromagnetics II	3
4400:360	Physical Electronics	3
4400:361	Electronic Designs	4
4400:363	Switching and Logic	4
4400:371	Control Systems I	4
4400:384	Energy Conversion I	3
4400:385	Energy Conversion Lab	2
• Electives:		
	Electrical Engineering Electives	18

## 4600: Mechanical Engineering

The mechanical engineer designs and analyzes physical systems. A high level of professional competence in this field can only be achieved through an extensive study of mathematics, mechanics, fluid flow and the thermal sciences. Among the many subtopics included in these major headings are stress analysis, vibrations, compressible and incompressible fluid flow, thermodynamics, energy conversion, environmental control, heat transfer and automatic controls. The typical mechanical engineering design problems may involve any one or possibly all of these areas in the design of a complex system.

The mechanical engineer is employed in a variety of industries in different capacities. Specific positions include management, design, analysis, safety, production and plant engineering. The types of companies include automotive, petroleum, energy generation, aerospace, tire, consulting, publishing, insurance and manufacturers in general.

The curriculum is designed to emphasize fundamentals which will place the graduate in a strong position to either pursue further education, formally or informally, or to begin a career in government or industry.

Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

- General Education — 30 credits.
- Natural science:
 

		<i>Credits</i>
3150:151,3 Principles of Chemistry I, II	7	
3450:221,2,3 Analytic Geometry-Calculus I, II, III	12	
3450:235 Differential Equations	3	
	3	Mathematics/Science Elective
3650:291,2 Elementary Classical Physics I, II	8	
- Engineering core:
 

4300:201 Statics	3	
4300:202 Introduction to Mechanics of Solids	3	
4400:320 Basic Electrical Engineering	4	
4600:165 Tools for Mechanical Engineering	3	
4600:203 Dynamics	3	
4600:300 Thermodynamics I	4	
4600:310 Fluid Mechanics	3	
- Mechanical engineering:
 

4600:301 Thermodynamics II	3	
4600:315 Heat Transfer	3	
4600:321 Kinematics of Machines	3	
4600:336 Analysis of Mechanical Components	3	
4600:337 Design of Mechanical Components	3	
4600:340 Systems Dynamics and Response	3	
4600:360 Engineering Analysis	3	
4600:380 Mechanical Metallurgy	2	
4600:400 Thermal System Components	3	
4600:401 Design of Energy Systems	2	
4600:431 Fundamentals of Mechanical Vibrations	3	
4600:441 Control System Design	3	
4600:460 Concepts of Design	3	
4600:461 Design of Mechanical Systems	2	
4600:484 Mechanical Engineering Laboratory	2	
4600:493 Measurements Laboratory	2	
- Electives:
 

Technical Electives credits (includes three credits design)	9	
Free Electives credits, adviser approval	3	

- Technical Electives — 7 credits:
 

		<i>Credits</i>
3370:210 Geomorphology		3
3460:201 Introduction to FORTRAN Programming		3
4300:313 Soil Mechanics		3
4300:314 Geotechnical Engineering		3
4300:361 Transportation Engineering		3
4300:414 Design of Earth Structures		3
4300:418 Soil and Rock Exploration		3
4300:450 Urban Planning		2
4300:474 Underground Construction		2
4980:351 Construction Quality Control		2
4980:355 Computer Applications in Construction		3
4980:465 Heavy Construction Methods		3
4980:467 Special Projects		1-3
4980:468 Construction Management		3
4980:470 Advanced Construction Graphics		3

## Bachelor of Science in Engineering

This degree program was established to introduce flexibility into the College of Engineering. Within the 66 credits of the option portion of the program, a student can pursue a focused curriculum in areas such as business administration, industrial management, environmental engineering or pre-medicine. The program of study may be very narrow as in the case of a student wishing to specialize in structural design, foundations and soil mechanics. For another student interested in patent law, the program may be broad, touching on chemical, mechanical and electrical engineering subjects. The individual's program is designed to meet each student's announced goals.

Entrance to this program is restricted. A student requests admission by letter to the dean of the College of Engineering, outlining in some detail the particular objective and how the B.S.E. program may enable the student to prepare for career goals. The mathematics, physics and chemistry requirements are identical to those of the ABET approved programs of the college.

	<i>Credits</i>
General Education and Science Core	61
Program Options Engineering	40
Program Options	26
Free Electives, adviser approval	10

## 4980: Construction Technology

The curriculum in construction technology is designed to produce a graduate with a strong fundamental knowledge of technology, combined with management ability and a familiarity with business, economics and personnel management. The program is designed to provide graduates for employment at all levels of the construction industry and allied support industries.

The program is a "two-plus-three" arrangement with the Community and Technical College and includes one full year of on-the-job experience. All students must meet the requirements of both the associate and baccalaureate programs.

Transferees may be admitted to the program.

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

- General Education — 15 credits.
- Required Science and Mathematics seven credits:
 

2030:356 Mathematics for Engineering Technology III	3	
3370:101 Introduction to Physical Geology	4	
- Required Technical Courses — 28 credits:
 

2920:244 Dynamics	2	
4980:352 Field Management	2	
4980:354 Foundation Construction Methods	3	
4980:356 Safety in Construction	2	
4980:357 Construction Administration	2	
4980:358 Advanced Estimating	3	
4980:361 Construction Formwork	3	
4980:453 Legal Aspects of Construction	2	
4980:462 Mechanical Service Systems	3	
4980:463 Electrical Service Systems	3	
4980:466 Hydraulics	3	
- Required Business Courses — 12 credits:
 

6200:201 Accounting I	3	
6200:202 Accounting II	3	
6400:371 Business Finance	3	
6500:301 Management Principles and Concepts	3	

- Polymer Engineering Specialization Certificate

The college also offers a Polymer Engineering Specialization Certificate for Chemical and Mechanical engineering students. To achieve a specialization a student must take one of the following Polymer Science and Polymer Engineering courses:

9871:401 Introduction to Elastomers	
	or
9871:402 Introduction to Plastics	
	or
9871:407 Polymer Science	

and:

9841:425 Introduction to Blending and Compounding of Polymers	
9841:427 Introduction to Molding Technology	

A Mechanical Engineering student may elect to choose a Design of Mechanical Systems or Design of Energy Systems or polymer-related project in lieu of one of the above 9841 polymer engineering courses.

- Mechanical Polymer Engineering

An interdisciplinary undergraduate program in mechanical polymer engineering is offered through the departments of Mechanical Engineering in the College of Engineering and the department of Polymer Engineering in the College of Polymer Science and Polymer Engineering.

# College of Education

William E. Klingele, Ed.D., *Dean*  
 Larry G. Bradley, Ph.D., *Associate Dean*  
 Sandra C. Coyner, Ed.D., *Assistant to the Dean*  
 Robert K. Eley, Ed.D., *Director of Student Services*

## OBJECTIVES

The purpose of the College of Education is to further the objectives of the University by providing quality programs for the student of education and by helping the student attain the following:

- Special experiences, knowledge and skills particularly useful for teaching in urban and inner-city educational institutions, in keeping with the urban missions of the University.
- A knowledge of a major field and related fields of inquiry and the ability to use this knowledge in explaining the realities of life today.
- A knowledge of instructional materials and new technology and skill in recognizing and utilizing instructional tools most suitable for specific purposes.
- A knowledge of the social issues relevant to education and living in a pluralistic society and the competence to translate implications of changes in society into instructive action as teacher-citizens as well as teacher-scholars.
- An understanding of the learner and the learning processes and the ability to translate these into appropriate teaching behaviors in acting and reacting with students.
- Skills in the acquisition of inquiry techniques appropriate to generalizing knowledge and choices, and practice in using them to inquire into educational problems in rational, defensible ways.
- Human relations skills, including an appreciation of the values and feelings essential for working with young people and with adults, and the ability to develop relationships in a wide variety of professional and social roles in an educational or community setting.

To achieve these objectives, the College offers programs for the preparation of teachers and other educational personnel pre K-adult. The bachelor's, master, and doctoral degrees are awarded upon successful completion of the appropriate courses of study.

Programs include a balanced offering of a foundation in general education, intensive study in the teaching and/or administration content area, and those professional courses and other learning experiences which attempt to combine theory and practice.

The education program and courses presented in this bulletin reflect the most current courses and program offerings. For further information about specific programs and requirements, contact the Dean's office.

## COLLEGE REQUIREMENTS

### Selection, Admission, Retention, and Teacher Certification\*

The College of Education has selective admission, retention, and graduation requirements for the completion of a program at The University of Akron.

A student admitted to The University of Akron, Fall 1995 Semester and thereafter will be expected to meet certain requirements of the College of Education and the respective department. The final decision for admission will be made by the student's department.

For retention through graduation, all decisions are made by the department, following the College's or department's approved criteria. Prior to admission to a program, Ohio requires all colleges and universities preparing teachers and educational personnel to assess students in the areas of oral and written communica-

tion, mathematics, academic aptitude and achievement, interpersonal relations and motivation. The University of Akron's College of Education admission procedures are designed to establish admission criteria, provide for assessments, allow for skills enhancement, reassessment and reapplication where appropriate, and support the admission of under-represented groups in education.

- **General Education Requirements** – To be admitted to the College of Education, all students must be able to meet the following criteria: A student must have completed at least 30 semester hours of coursework. This coursework must include three semester hours in each of the required courses in mathematics, natural science, social science, and public/oral communications, four (4) semester hours in English composition and one (1) semester hour of physical education. Appropriate General Education equivalencies for transfer students will be determined by the University College Dean's Office. The remaining 13 semester hours must consist of general education coursework that meets the requirements of the University and the admission requirements of the department's program studies area.
- **Grade-Point Average** – For admission, a student must have an overall GPA of 2.50. Also, students must have a GPA of 2.50 in their department's specified pre-admission coursework (30-32 credits).
- **College Mathematics** – All students must have at least a grade of "C" in three semester credit hours, subject to meeting the department's and the University's general education requirement, or a Pre-Professional Skills Test subscore in mathematics of 171, or a passing score on AP Test in mathematics, or a passing score on the CLEP test.
- **Reading and Writing** – All students must have at least a "B" in 3300:111 English Composition I, or A Pre-Professional Skills Test Writing subscore of 169 and reading subscore of 171, or A passing score on AP Test in English, or A passing score on English CLEP test.
- **Speech and Hearing** – Ohio law requires that all education students take a speech and hearing test through a licensed professional and/or approved clinic. Students with deficiencies must follow through on recommended treatment.
- **Good Moral Character** – Ohio law requires that all students sign a statement attesting to good moral character.
- **College of Education Application** – All students must complete a College of Education application form.

### Application for Admission to Professional Education Programs

All students are expected to complete an application for admission. Applications are available in the Dean's Office.

- **References** – Students are expected to ask two individuals, not related to them, but who know them well, to complete a reference form attesting to their interpersonal skills and motivation to teach.
- **Program Area of Study** – All students are expected to comply with requirements specified by the program to which they are applying. These are available in the department.
- **Advisement** – All students will be assigned an advisor, who will complete an individual advisement program plan. All students will meet annually (or more often if necessary) for academic advisement regarding progress through their programs of study.
- **Retention** – Retention of students in each program will be evaluation-based. Students will have opportunities to upgrade their skills and achievement in areas where such needs may exist. Completion of program requirements will be reviewed annually by the student and advisor. Areas of strength and weakness are to be evaluated, and, if a student presents an area of weakness, the advisor will refer the student for remediation. Approval to student teach is contingent on the student's progress through the program of study with satisfactory grades. Graduation is contingent on completion of coursework, student teaching, G.P.A. of 2.5 overall, 2.5 in education classes, and 2.5 in the student's major, and a comprehensive assessment of basic competency to be administered during the senior year.
- **Certification** – After graduation, students may apply for certification through the Office of Student Services. The State of Ohio requires all applicants for certification to pass the National Teachers Examination (NTE). Information about specific requirements for specific certificates can be obtained from the departments. All criteria and procedures regarding selective admission and retention are available in the Office of Student Services, Zook Hall, The University of Akron, Akron, OH 44325, phone (216) 972-6966.
- **Conditional Admission** – Students who meet all admission requirements except the completion of the 30 hours, and are currently enrolled in the courses to complete these hours, may register for Phase I education courses.

\* These requirements do not apply to non-teacher certification degree programs. See specific program requirements for those areas.

- **Transfer Students** – Transfer students will be expected to meet the same admission standards as Akron students.
- **Post-Baccalaureate Students** – Qualified post-baccalaureate students will be admitted conditionally to the College of Education and to the appropriate department.

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## Bachelor's Degrees

A student prepares to teach any one of the following areas or fields: pre-kindergarten, elementary; the conventional academic fields found in middle, junior and senior high schools; the special fields of art, drama, dance, business, home economics, music, health education, education of exceptional pupils and post-secondary technical education. A minimum of 128 credits with a grade-point average of 2.50 overall, 2.5 in education classes, and 2.5 in the student's major must be completed to qualify for the bachelor's degree.

The specific subjects required for degrees in certain fields are set forth in subsequent pages. In all cases, the requirements include courses in General Education, content areas and professional education.

The Bachelor of Arts in Education degree is granted to those whose major is in one of the academic fields. The Bachelor of Science in Education is granted to those whose major is in the other special fields or in elementary education.

The Bachelor of Science in Technical Education is awarded to those who complete the requirements of that program.

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## Teacher Education Program

*Overview* – The central theme of The University of Akron's Teacher Education Program is "Educator as Decision-Maker." This was chosen because the complexity of teaching is increasing and the professional knowledge base is growing. Consequently, the most important skill a future teacher can have is good decision making; knowing "when to do what." Decision making is reflected in the program's 17 beginning teacher competencies (BTC's), which are stressed throughout the program, in all courses and field experiences.

*Beginning Teacher Competencies (BTC's)* – Regardless of their area of certification, all teacher education students will receive training in the 17 competencies that the College's faculty believe every beginning teacher should have. They are: 1) Communication skills, 2) Characteristics of learners, 3) Planning and instruction, 4) Knowledge of teaching strategies, 5) Commitment to lifelong learning, 6) Problem solving, 7) Decision making, 8) Motivation, 9) Communication with parents, 10) Assessment, 11) Diversity of learners, 12) Appreciation of the right of equal access to education, 13) Use of instructional resources, 14) Knowledge of health and safety needs, 15) Ability to structure subject matter, 16) Classroom management, and 17) Knowledge of a specialty area. These competencies include knowledge, skills, attitudes, and values.

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## Professional Preparation

Built on a foundation of general studies that begins prior to admission, the Teacher Education Program is organized into four phases that reflect how teachers can learn to make good decisions.

- *Phase I. Learning About Learners.* "How can I use information about myself and others to understand decisions about students and learners?"
- *Phase II. Learning About Teaching.* "How do I use principles of learning to make instructional decisions?"
- *Phase III. Learning to Apply the Principles of Teaching.* "How do I make instructional decisions for specific groups of students?"
- *Phase IV. Learning to Teach.* "How do I make the best decisions for students?"

During each phase of the program, students take a combination of core courses, field experiences, and courses in their program studies area that are tied to each phase. The core courses cover the knowledge base that is common for all teachers, regardless of their teaching field. The field experiences provide students with experience in schools from the very beginning of their program.

Program studies area courses are related to students' intended area of certification. In addition, students have an adviser to help plan what to study and to review what has been accomplished.

Some courses are taught in blocks, which permit students to integrate what they are learning. For example, students will take instructional design and instructional resources as a block; this provides an opportunity to plan instruction and develop resource materials for instruction at the same time. Additionally during their field and clinical experiences, teacher education students learn to apply what they are learning in courses.

The culminating experience for teacher education students is student teaching.

Under the supervision of a team of college faculty and a classroom teacher, each student teacher begins to put newly developed competencies into practice.

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## Clinical and Field-Based Experiences

All teacher education students are required to participate satisfactorily in clinical and field-based experiences for a minimum of 600 hours prior to recommendation for certification for teaching in Ohio. These clinical and field-based experiences are designed to provide teacher education students with the opportunity to apply theory and skills related to their areas of certification in at least one-half of the clinical and field-based clock hours. The field-based experiences are planned in culturally, racially, and socio-economically diverse settings. Clinical experiences are those planned activities in which teacher education students apply the principles of the field of teaching to individual cases or problems.

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## Student Teaching

Student teaching is done in the public schools under the direction of a cooperating teacher and a representative of the College of Education faculty.

All students must have their education adviser's recommendation and approval of the Teacher Education Review Committee prior to the student teaching experience.

To qualify for student teaching, students must have a 2.50 average overall, 2.5 in education classes, and 2.5 in the student's major, and in methods courses (as defined by departments), core courses and in their teaching field(s). Satisfactory completion of at least 300 hours of field and clinical experience is also required before student teaching.

**Note:** Music majors, before assignment for student teaching, are required to pass the General Musicianship Examination described in the music section of the College of Fine and Applied Arts. To avoid possible delay in graduation, it is necessary for the student to take the examination six months prior to the anticipated assignment for student teaching.

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## Certification

Every teacher in Ohio public schools is required to have a teaching certificate covering the fields in which teaching is being done. This certificate is issued by the Ohio State Department of Education upon recommendation of the dean of the college. The student must pass the National Teacher Examination, complete the appropriate program requirements successfully, and be recommended for a teaching certificate. Application for the certificate may be obtained from the Office of Student Services, College of Education, Zook Hall 213; (216) 972-7696.

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## Students Enrolled in Other Colleges at The University of Akron

All students, regardless of the degree-granting college in which they are enrolled, must fulfill requirements for admission to a teacher education program within the College of Education and must comply with procedures on selective admission and retention, and recommendation for certification. (Please see requirements listed elsewhere in the bulletin section.)

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## Cooperative Education

The requirements for participation in the Co-op Program are as follows. The student must:

- Be admitted to the College of Education, which requires completion of 30 credit hours with at least a 2.50 overall grade-point average.
- Sign an agreement card which states that participation in Cooperative Education will not meet College of Education or State of Ohio requirements for clinical/field experience or student teaching.
- Agree to abide by all rules and regulations of Cooperative Education.
- Apply for admission to Cooperative Education through the completion of a Cooperative Education workshop.

# PROGRAMS OF INSTRUCTION

## 5200: Elementary Education

### Elementary

The elementary program is for those preparing to teach in grades one through eight inclusive. Students in this program must achieve a "C" or better in all 5200 courses in order to student teach. Requirements for a major in elementary education are as follows:

• General Education — 43 credits			Credits
3300:111	English Composition I*	(Minimum grade of C or better)	4
3300:112	English Composition II*	(Minimum grade of C or better)	3
3350:100	Introduction to Geography*		3
3400:250	United States History*		4
	or		
3700:100	Government and Politics in the United States*		4
5540:—	Physical Education*		1
7600:105	Introduction to Public Speaking*		3
	or		
7600:106	Effective Oral Communication*		3
3450/3470:xxx	Math Requirement* (3450:100 does not count)		3
	Natural Sciences*		8
	<i>(See General Education program under University College. For certification, at least 4 credits must be in Biology.)</i>		
	Humanities		10
	<i>(See General Education program under University College)</i>		
	Area Studies/Cultural Diversity Requirement		4
	<i>(See General Education program under University College)</i>		

**NOTE:** In addition to the preadmission coursework cited above, students are required to take three credits of coursework from the area of concentration at the 100/200 level that is not already used above. These three credits are required for admission to the College of Education.

• Professional Education:			Credits
5050:210	Characteristics of Learners		3
5050:211	Teaching and Learning Strategies		3
5050:310	Instructional Design		3
5050:311	Instructional Resources		3
5050:320	Diversity in Learners		3
5050:330	Classroom Management		3
5050:410	Professional Issues in Education		3
5200:215	The Child, the Family, and the School		2
5200:220	Visual Arts Culture in the Elementary School		1
5200:245	Understanding Language Literacy		3
5200:250	Developing the Processes of Investigation		3
5200:320	Visual Arts Application in the Elementary School		3
5200:333	Science for Elementary Grades		3
5200:338	Teaching of Social Studies		3
5200:342	Teaching of Elementary School Mathematics		4
5200:345	Teaching Language Literacy		4
5200:325	Elementary Field Experience		2
5200:365	Music for Elementary Teachers		3
5200:403	Student Teaching Seminar		1
5200:445	Evaluating Language Literacy		3
5200:450	Integrated Curriculum Application in the Elementary School		3
5200:495	Student Teaching		5
5200:496	Student Teaching		5
5550:334	Games and Rhythms		3
5570:101	Personal Health		2

### • Area of Concentration — 20 credits

A minimum of 20 credits in an area of concentration is required. Some general education courses fulfill partial requirements in selected concentrations. Specific requirements for each area are available in the Office of Elementary Education, Zook Hall. Areas of concentration have been approved in the following disciplines:

Communication	Mathematics
Economics	Psychology
English and Literature	Science
Foreign Language	Sociology
Geography	The Family
History	

Minimum number of hours required for graduation and certification 137

\* Required for admission to the College of Education. (Total of 32 credits)

### Kindergarten Endorsement

The student in the elementary program may receive endorsement for kindergarten by taking the following courses:

• Required:		Credits
7400:265	Child Development	3
5200:330	Kindergarten Policies, Issues, and Trends	4
5200:331	Kindergarten Methods and Materials	4

### Pre-Kindergarten Validation

The student in the elementary program may also receive validation in pre kindergarten by taking the following courses:

5200:310	Introduction to Early Childhood Education	3
5200:360	Teaching in the Nursery Center	2
5200:370	Teaching in Nursery Center Laboratory	2
7400:265	Child Development	3
7400:270	Theory and Guidance of Play	3
7400:280	Creative Activities for Pre-Kindergarten Children	4
7400:460	Organization and Supervision of Child Care Centers	2

### Certification for Teaching Foreign Language in the Elementary School

A person desiring certification to teach modern foreign language on the elementary level must meet the regular requirements for certification on the secondary level, plus these Ohio requirements:

- Child psychology of human growth and development.
- Purpose and practices of elementary education or equivalent.
- Methods of teaching the modern foreign language.

### TESOL Validation (Teaching English to Speakers of Other Languages)

This program introduces students to the key issues in teaching English to non-native speakers through coursework in linguistics, second language theory and methods, and in related disciplines.

Students may become validated in TESOL at either the undergraduate or graduate levels in conjunction with certification in elementary education or secondary education.

Students seeking this validation must have studied a foreign language at some time during their academic career.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of 580 or above and a score of 240 or above on the TSE (Test of Spoken English).

• Required coursework:		
3300:270	Introduction to Linguistics	3
	or	
3300:489	Introduction to Bilingual Linguistics	3
3300:473	Seminar in Teaching ESL: Theory and Method	3
3300:489	Seminar in English: Sociolinguistics	3
	or	
3300:489	Seminar in English: Grammatical Structures of Modern English	3
5630:481	Multicultural Education in the United States	3
5630:487	Techniques for Teaching English as a Second Language in the Bilingual Classroom	4
5630:485	Teaching Reading and Language Arts to Bilingual Students	4
	Field Experience in Teaching English as a Second Language	2

### Certification of Non-Professional Degree Holders for Elementary School

To qualify for a provisional Elementary Certificate, the holder of a baccalaureate degree in fields other than education should complete the course work equivalent to that required for a major in elementary education.

- Pre-professional education and General Education:

A student may be required to take courses from the pre-professional education and General Education sections if previous transcripts reveal an insufficient background in those areas or in courses listed under elementary education.

- Professional education:

5050:210	Characteristics of Learners	3
5050:211	Teaching and Learning Strategies	3

		Credits
5050:310	Instructional Design	3
5050:311	Instructional Resources	3
5050:320	Diversity in Learners	3
5050:330	Classroom Management	3
5050:410	Professional Issues in Education	3
<b>• Elementary Education:</b>		
1200:215	The Child, The Family, and The School	2
1200:220	Visual Arts Culture in the Elementary School	1
1200:245	Understanding Language Literacy	3
1200:250	Developing the Processes of Investigation	3
1200:320	Visual Arts Application in the Elementary School	3
1200:325	Elementary Field Experience	2
1200:333	Science for Elementary Grades	3
1200:338	Teaching of Social Studies	3
1200:342	Teaching of Elementary School Mathematics	4
1200:345	Teaching Language Literacy	4
1200:365	Music for Elementary Teachers	3
1200:403	Student Teaching Seminar	1
1200:445	Evaluating Language Literacy	3
1200:450	Integrated Curriculum Application in the Elementary School	3
1200:495	Student Teaching	5
1200:496	Student Teaching	5
1500:334	Games and Rhythms	2
1570:101	Personal Health	2

If certification for teaching kindergarten is desired, the following courses must be scheduled:

7400:265	Child Development	3
5200:330	Kindergarten Policies, Issues and Trends	4
5200:331	Kindergarten Methods and Materials	4

### Pre-Kindergarten Certification—Birth to Kindergarten

- General Education — 42 credits
- Professional Education
 

5200:200	Pre-K Participation	1
5200:300	Pre-K Participation	1
5200:310	Introduction to Early Childhood Education	3
5200:403	Student Teaching Seminar	1
5200:495	Student Teaching	8
7400:265	Child Development	3
7400:280	Creative Activities for Pre-K Children	4
7400:303	Children as Consumers	3
7400:448	Before/After School Child Care	2
7400:360	Parent-Child Relations	3
7400:401	Family Life Styles: Economically Deprived Home	2
7400:460	Organization and Supervision of Child Care Centers	3
- Curriculum
 

2200:245	Infant-Toddler Day Care	3
2200:250	Observation and Recording Child Behavior	3
5200:315	Issues and Trends in Early Childhood Education	3
5200:355	Language, and Literature for Early Childhood Education	3
5200:360	Teaching in the Nursery Center	2
5200:370	Nursery Center Lab	2
5550:336	Motor Learning	2
5610:450	Special Education Programming: Early Childhood	3
7400:132	Early Childhood Nutrition	2
7400:270	Theory and Guidance of Play	3
- Area of Concentration — minimum of 20 credits from the following:
 

Communications	Mathematics
Economics	Psychology
English and Literature	Science
Foreign Languages	Sociology
Geography	The Family
History	

### Certification for Teaching Music in the Elementary School

Any student who completes a regular four-year program which qualifies for a Four-Year Provisional Elementary Certificate\* may have that certificate validated for teaching music in the elementary school by completing the following courses:

7500:497	Independent Study (Music Student Teaching)	2
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\* The elementary education major is responsible for completing 300 field and clinical hours in addition to student teaching. It will be the responsibility of the department to assign these credits to the appropriate courses.

		Credits
7500:107	Class Voice	2
	or	
7520:124	Applied Voice	2
7500:151,2	Music Theory I and II	6
7500:154,5	Music Literature I and II	4
7500:261	Keyboard Harmony I	2
7500:340	General Music	3
7500:341	Wind- Percussion Instrument Techniques	3
7500:356	Music: Teaching Handicapped	2
	or	
7500:110	Class Guitar	2
7500:497	Independent Study	2
7510:xxx	Music Organization	2

### Dual Certification Program Elementary and Secondary

This curriculum prepares teachers for both elementary and secondary school. A student completing this curriculum will receive the Four-Year Provisional Certificate to teach in the secondary school and a certificate which will qualify the holder to teach in grades one through eight in the elementary school.

A student in this program must meet the requirements for elementary education; must complete 5300:310, Principles of Secondary Education, and 5300:311, Instructional Techniques in Secondary Schools; and must meet the requirements in the field or fields of teaching at the secondary level in which certification is requested. For advisement in this area, contact the head of the department.

A combination elementary and special education program is offered; **see 5610: Special Education.**

Reminder: All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of the Dean, College of Education, Zook Hall 210, The University of Akron, Akron, OH 44325; (216) 972-5188.

### 5300: Secondary Education

The secondary program is for the student preparing to teach in middle, junior and senior high schools. A list of the specific requirements for the various teaching fields will be provided for the student by the college adviser or by the head of the Department of Curricular and Instructional Studies. For information regarding employment in non-school settings which capitalize on a teacher's skills, see the department head.

A student must have completed at least eight semester credits in the teaching field with a 2.5 grade-point average, both overall and in the teaching field(s), before transferring to the upper college and must have at least a "C" grade in English composition or its equivalent. A student must have a minimum of a 2.5 grade-point average in the declared teaching fields and education courses to be eligible for placement for student teaching.

The general requirements for a major in secondary education are as follows:

- General Education — 42 credits
 

3300:111	English Composition I*	(Minimum grade of C or better)	4
3300:112	English Composition II*	(Minimum grade of C or better)	3
5540:xxx	Physical Education*		1
7600:105	Introduction to Public Speaking*		3
	or		
7600:106	Effective Oral Communication*		3
3450/3470:xxx	Math Requirement* (3450:100 does not count)		3
	Natural Sciences (five credits required for admission to College of Education)	(See General Education program under University College.)	8
	Social Science (three credits required for admission to College of Education)	(See General Education program under University College.)	6
	Humanities		10
	Area Studies/Cultural Diversity Requirement	(See General Education program under University College.)	4

**NOTE:** In addition to the preadmission coursework cited above, students are required to take eight credits of coursework in their teaching fields\*. This does not include coursework already used above. A 2.50 GPA in all completed teaching field coursework is required.

- Professional courses (courses to be taken in an approved sequence):

5050:210	Characteristics of Learners	3
5050:211	Teaching and Learning Strategies	3
5050:310	Instructional Design	3
5050:311	Instructional Resources	3

\* Required for admission to the College of Education (Total of 30 credits).

		Credits
5050:320	Diversity of Learners	3
5050:330	Classroom Management	3
5050:410	Professional Issues-in Education	3
5300:311	Instructional Techniques in Secondary Education®	5
5300:375	Exploratory Experience in Secondary Education®	1
5300:445	Microcomputer Literacy	2
5300:495	Student Teaching	8
5300:496	Student Teaching Colloquium	1

- Courses in teaching field(s) and electives as determined by the department.

## Teaching Fields

Each student preparing for secondary school teaching must have at least two defined teaching fields. However, if a student chooses one of the comprehensive or special teaching fields, as listed below, preparation in a second field will not be required.

## Minimum Number of Credits Required for Approval in Various Teaching Fields

### Comprehensive Subjects by Field

Business Education (with shorthand)**	65-67
Business Education (without shorthand)	65-67
Communications	62
Marketing Education	60-64
Consumer Homemaking and Multi-Area Vocational Science/Physical Science	55
Social Studies	85-87
Vocational Business Education	60
Vocational Consumer Home Economics†	70-74
Vocational Consumer Home Economics w/ Multi-Area Job Training‡	56
	63

### Special Fields K-12

Dance	45
Foreign Language	45
Health – as determined by Department of Physical and Health Education	62-65
Library/Media	33
Music – as determined by Department of Music	
Physical Education – as determined by Department of Physical and Health Education	59
Speech and Hearing Therapy – as determined by Department of Communicative Disorders	
Graduate Special Education – as determined by Department of Counseling and Special Education	57-71
Visual Arts	58

### Specific Subjects by Field

Biology	51
Bookkeeping Basic Business	30-32
Chemistry	53
Computer Science	39
Drama/Theatre	30
Earth Science	51-52
Economics	30
English	38
Foreign Languages	45
General Science	44
Geography	30
Health Education (7-12)	59-61
History	32
Home Economics	45
Latin	30
Library/Media	30
Mathematics	32-33
Physical Education (7-12)	51
Physics	55-56
Political Science	30
Psychology/Sociology	38
Sales Communication	32
Speech/Communications	30
Stenography and Typewriting/Keyboarding**	35
Visual Art	35

## 5400: Technical Education

The undergraduate program in technical education is designed to prepare instructors and other personnel for post-secondary educational institutions, industry and public and private agencies engaged in the education and training of technicians. The program is divided into the following major classifications: business technologies, engineering technologies, health technologies, natural science technologies and public service technologies. The baccalaureate program is intended to produce instructors primarily for teaching subjects within a technical specialty. Graduates of this program are awarded the degree of Bachelor of Science in Technical Education.

A student may elect other career areas when the courses are available and the adviser approves.

The technical education program includes work in four areas: General Studies; the technical specialty; professional education; and occupational experience. Specific course requirements may be secured from the Department of Secondary Education or from the advisers in technical education.

Technical Education students are exempt from their PPST, the speech/hearing test, and the letters of recommendation relative to admission criteria

## Requirements for Graduation

In addition to the general requirements of the College of Education, a student in technical education must obtain at least a 2.50 average in all major departmental professional courses (5400), all professional education courses and a 2.50 average in all technical courses directly related to the student's teaching field.

*Reminder:* All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of the Dean, College of Education, Zook Hall 210, The University of Akron, Akron, OH 44325; (216) 972-5188.

## 5550: Physical Education

## 5560: Outdoor Education

## 5570: Health Education

Undergraduate programs in the Department of Physical and Health Education lead to state certification in health and physical education (7-12 and K-12). There is also a school nurse certification program, as well as one in dance. State validation is also available in adapted physical education.

Certificate programs are offered in athletic training for sports medicine (NATA) and athletic coaching. A non-NATA program is also available for those students considering physical therapy and other allied areas. In addition to public school employment, graduates may be prepared for employment in various recreation professions, business and industry fitness centers, and numerous allied health and exercise professions.

- General Education Courses for all Department of Physical and Health Education majors (43-45 credits)

		Credits
3100:208	Human Anatomy and Physiology* and	4
3100:209	Human Anatomy and Physiology*	4
—:—	Natural Science*#	1
	(See General Education requirements under University College. Select from any set except Biology.)	
3300:111	English Composition I*	4
3300:112	English Composition II*	3
3400:210	Humanities in the Western Tradition I	4
—:—	Humanities Coursework	6
	(See General Education requirements under University College)	
—:—	Area Studies/Cultural Diversity	4
	(See General Education requirements under University College)	
3750:100	Introduction to Psychology*	3
3850:100	Introduction to Sociology*	4
5540:xxx	Physical Education (Health Education/Athletic Training/ Dance Education only)*	1
7600:105	Introduction to Public Speaking*	3
	or	
7600:106	Effective Oral Communication*	3

® Variations will occur in K-12 certification fields. See Program Plan sheets for specific courses.

\*\* See Advisor

† Home Economics and Family Ecology majors.

‡ Options are also available in Job Training for the fields of Food Service, Fabrics, Child Care, and Health and Community.

\* Required for admission to College of Education.

# These courses are not required of Athletic Training for Sports Medicine (NATA/non-NATA).

1 Take these courses together

2 Take these courses together

• Mathematics (choose one option)\*

		Credits
Option 1		
3450:113	Combinatorics and Probability	1
3450:114	Matrices	1
3450:138	Mathematics of Finance	1
Option 2		
3470:260	Basic Statistics	3
Option 3		
3450:138	Mathematics of Finance	1
3470:261	Introduction to Statistics	2
Option 4		
3450:145	College Algebra	4

• Professional Education Courses for all Department of Physical Education and Health Education majors\* (33 credits)

5050:210	Characteristics of Learners <sup>1</sup> and	3
5050:211	Teaching and Learning Strategies <sup>1</sup>	3
5050:310	Instructional Design <sup>2</sup> and	3
5050:311	Instructional Resources <sup>2</sup>	3
5050:320	Diversity in Learners	3
5050:330	Classroom Management	3
5050:410	Professional Issues in Education	3

The following should be taken at the same time but only after completion of all General Studies, Professional Education, and Department requirements are completed.

5550:494	Student Teaching Colloquium for Physical and Health Education	2
5550:495	Student Teaching for Physical and Health Education	10

**K-12 Physical Education Courses**

- General Education and Professional Education Courses listed above
- Courses should be taken from the following areas in the recommended sequence (see adviser):

**Area 1**

5550:102	Fitness and Contemporary Activities <sup>t</sup>	2
5550:308	Dance and Tumbling <sup>t</sup>	2

**Area 2** Choose at least four credits from the following:

5550:204	Soccer and Swimming	2
5550:205	Basketball and Track/Field	2
5550:306	Badminton and Golf	2
5550:307	Tennis and Volleyball	2

**Area 3** (all 5550: and 5560 courses in this Area required for admission to College of Education)

3100:208	Human Anatomy and Physiology and	4
3100:209	Human Anatomy and Physiology	4
5550:130	Physical Education Activities for Elementary School Children	2
5550:193	Orientation to Teaching Physical Education*	3
5550:195	Concepts of Games and Play	2
5550:201	Kinesiology	3
5550:202	Diagnosis of Motor Skills	2
5550:203	Measurement and Evaluation in Physical Education	3
5550:211	First Aid and CPR	2
5550:235	Concepts of Motor Development and Learning	3
5550:245	Adapted Physical Education	3
5550:302	Physiology of Exercise	3
5550:335	Movement Experiences for Elementary School Children	3
5550:345	Instructional Techniques: Elementary Physical Education	3
5550:346	Instructional Techniques: Secondary Physical Education	3
5550:450	Organization and Administration of Physical Education, Intramurals, and Athletics	3
5550:452	Foundations of Physical Education	3
5560:454	Resident Outdoor Education	2

Additional 5550 courses are offered but **not required** for certification

**Secondary School (7-12) Certification**

Courses required for secondary certification include all of the requirements for Provisional Special (K-12) Certification (listed previously) except: 5550:130, 335, and 345.

**5570: Health Education**

**K-12 Health Education**

- See 5550 Physical Education for General Studies and Professional Education requirements
- Courses should be taken in the recommended sequence (see adviser):

		Credits
2260:240	Chemical Dependency I	3
3100:130	Principles of Microbiology	3
3100:208	Human Anatomy and Physiology and	4
3100:209	Human Anatomy and Physiology	4
3850:100	Introduction to Sociology	4
5300:325	Content Reading in Secondary Schools	3
5550:211	First Aid and CPR	2
5550:302	Physiology of Exercise	3
5570:101	Personal Health	2
5570:201	Foundations in Health Education	3
5570:202	Stress, Life Style, and Your Health	3
5570:320	Community Health	2
5570:321	Organization and Administration of School Health and Health Services	4
5570:322	Current Topics in Health Education	3
5570:323	Methods and Materials of Teaching Health Education	3
5570:350	Measurement and Evaluation in Health Education	3
5570:395	Field Experience in Health Education	1-3
5570:400	Environmental Health	3
5570:460	Practicum in Health Education	2
5570:497	Independent Study	1-2
7400:133	Nutrition Fundamentals	3
	Elective(s) (see adviser)	3

Additional 5570 courses are offered but **not required** for certification

**Secondary Health Education (7-12)**

Courses required for certification in secondary school health education include all of the requirements for Provisional Special (K-12) Certification in Health Education (listed previously) except: 5570:460 and 497.

**School Nurse Certification**

The provisional school nurse's certificate will be issued to the holder of a bachelor's degree from an approved college or university, provided the pattern of preparation leading to the degree conforms to the following requirements:

- R.N. License
- Acceptance into the College of Education
- Coursework well distributed over the following areas:
  - Community Health
  - Family Counseling
  - Mental and Emotional Health, Current Topics in Health Education
  - Methods of Teaching/Instructional Design
  - Learner and Learning processes
  - Evaluation and Measurement of Learning
  - Principles, Organization and Administration of School Health Services
- A supervised school nurse experience in an approved school setting to approximate the school day for a period not less than one full semester.

To satisfy the above requirements, an applicant must complete at least the following courses or their equivalents:

5570:320	Community Health	2
5570:321	Organization and Administration of School Health and School Health Services	4
5570:323	Methods and Materials of Teaching Health Education	3

At least (8) eight credits from the following:

2250:240	Chemical Dependency	3
7400:201	Courtship, Marriage and Family Relationships	3
5570:101	Personal Health	2
5570:202	Stress, Life Style and Your Health	3
5570:322	Current Topics in Health Education	3
5570:350	Measurement and Evaluation in Health Education	3
5570:400	Environmental Health	3
5550:490/590	Workshops in Current Health Education Topics	2-4

(Maximum 4 credits)

\* Required for admission to College of Education.

		Credits
And one of the following:		
5550:495	Student Teaching for Health Education	10
	or	
5550:460	Practicum in Physical Education	6
	or	
	Equivalent of two years experience as a school nurse	
<b>TOTAL</b>		<b>23-27</b>

**Note:** Students must take a minimum of six credits in the department (5550/5570). This does not include 5550:495 or 5550:460.

		Credits
5550:211	First Aid and CPR	2
5550:240	Care and Prevention of Athletic Injuries	3
5550:245	Adapted Physical Education	3
5550:302	Physiology of Exercise	3
5550:395	Field Experience	3
5550:441	Advanced Athletic Injury Management	4
5550:442	Therapeutic Modalities and Equipment in Sports Medicine	3
5550:450	Organization and Administration of Physical Education, Intramurals, and Athletics	3
5550:460	Practicum in Physical Education	3
5550:460	Practicum in Physical Education	4
5550:475	Seminar in Health and Physical Education	3
5550:480	Special Topics: Pharmacology for Sports	3
5550:497	Independent Study	2
5570:202	Stress, Life-Style, and Your Health	3
7400:133	Nutrition Fundamentals	3
7400:487	Sports Nutrition	3
2260:240	Chemical Dependency	3
3100:112	Principles of Biology	4
3100:461	Human Physiology	3
3100:462	Human Physiology	3
3100:465	Advanced Cardiovascular Physiology	3
3650:261	Physics for Life Sciences	4
3650:262	Physics for Life Sciences	4
5550:xxx	Sports Medicine Workshops	1-3
5550:xxx	Physical Education Workshops	1-3
5570:xxx	Health Education Workshops	1-3

**Certification in Dance (K-12)**

- See 5550: Physical Education for General Education requirement and Professional Education courses listed previously
- Courses should be taken in the recommended sequence (see adviser):

5300:325	Content Reading in Secondary Schools	3
7500:100	Fundamentals of Music	2
7900:115	Dance as an Art Form	2
7910:101-111	Dance Organization	1
7910:101-111	Dance Organization	1
7910:101-111	Dance Organization	1
	<i>(Enrollment in Dance Organization by audition only)</i>	
7910:108	Choreographers' Workshop	1
7910:112	Dance Production Ensemble	1
7920:116	Physical Analysis for Dance I	2
7920:117	Physical Analysis for Dance II	2
7920:222	Ballet VI: Advanced Intermediate Technique	5
	<i>(Enrollment by audition only)</i>	
7920:316	Choreography I	2
7920:317	Choreography II	2
7920:320	Dance Notation	2
7920:328	Modern Dance VII: Advanced Modern Dance A	3
	<i>(Enrollment by audition only)</i>	
7920:351	Jazz Dance Styles	2
	<i>(Enrollment by audition only)</i>	
7920:361	Learning Theory for Dance	2
7920:362	Instructional Strategies for Dance	2
7920:416	Choreography III	2
7920:417	Choreography IV	2
Choose one History:		
7920:431	Dance History: Prehistory - 1661	2
7920:432	Dance History: 1661 Through Diahliiev Era	2
	or	
7920:433	Dance History: 20th Century	2
7920:461	Seminar and Field Experience in Dance Education	2
7920:462	Professional Issues in Dance Education	2
	Electives (see adviser)	4

- Select at least (9) nine credits from the following electives. The elective courses must first be approved by adviser.

Students not seeking teacher certification are exempt from the PPST for admission.

**Non-NATA Program**

- The following are required in the recommended sequence (see adviser):

2740:120	Medical Terminology	3
3100:130	Principles of Microbiology	3
3100:208, 209	Human Anatomy and Physiology	8
3150:129	Introduction to General, Organic and Biochemistry I	4
3150:130	Introduction to General, Organic and Biochemistry II	4
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology	4
5550:150	Concepts of Health and Fitness	3
5550:201	Kinesiology	3
5550:202	Diagnosis of Motor Skills	2
5550:211	First Aid and CPR	2
5550:240	Care and Prevention of Athletic Injuries	3
5550:245	Adapted Physical Education	3
5550:302	Physiology of Exercise	3
5550:395	Field Experience	3
5550:441	Advanced Athletic Injury Management	4
5550:442	Therapeutic Modalities and Equipment in Sports Medicine	3
5550:450	Organization and Administration of Physical Education, Intramurals, and Athletics	3
5550:475	Seminar in Health and Physical Education	3
5550:480	Special Topics: Pharmacology for Sports	3
5570:202	Stress, Life-Style, and Your Health	3
7400:133	Nutrition Fundamentals	3
7400:487	Sports Nutrition	3

- Select 21-22 credits from the following electives. The electives must first be approved by adviser.

2260:240	Chemical Dependency	3
3100:111	Principles of Biology	4
3100:112	Principles of Biology	4
3100:461	Human Physiology	3
3100:462	Human Physiology	3
3100:465	Advanced Cardiovascular Physiology	3
3150:132	Principles of Chemistry I	4
3470:2xx	Statistics	2-3
3650:261	Physics for Life Sciences	4
3650:262	Physics for Life Sciences	4
5550:460	Practicum in Physical Education	3-6
5550:497	Independent Study	1-2
5550:xxx	Sports Medicine Workshops	1-3
5550:xxx	Physical Education Workshops	1-3
5570:xxx	Health Education Workshops	1-3

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**Adapted Physical Education (Validation)**

A validation of an existing Ohio Standard Physical Education certificate may be granted upon successful completion of the following courses:

5550:395	Field Experience (at least two credits required)	1-3
5550:436	Foundations and Elements of Adapted Physical Education	3
5550:451	Assessment and Evaluation in Adapted Physical Education	3
5550:455	Motor Development of Special Populations	3
5550:497	Independent Study (at least two credits required)	1-2
5610:440	Developmental Characteristics of Exceptional Individuals	3
5610:465	Neuromotor Aspects of Physical Disabilities	3
5610:467	Classroom Behavior Management of Exceptional Individuals	3

**Athletic Training for Sports Medicine@**

**NATA Program**

To be eligible to take the National Athletic Trainer's Association (NATA) certification test, the student must complete a course of study at The University of Akron and compile at least 1,500 hours of practical field and clinical experiences.

- See 5550: General Education requirements listed previously
- Courses should be taken in the recommended sequence (see adviser):

2740:120	Medical Terminology	3
3100:130	Principles of Microbiology	3
3100:208, 209	Human Anatomy and Physiology	8
3150:129	Introduction to General, Organic and Biochemistry I	4
3150:130	Introduction to General, Organic and Biochemistry II	4
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology	4
5550:150	Concepts of Health and Fitness	3
5550:201	Kinesiology	3
5550:202	Diagnosis of Motor Skills	2

@ Students interested in either program should contact the head athletic trainer.

## 5610: Special Education

The Special Education program involves in-depth preparation in one of the certification areas: Developmentally Handicapped, Specific Learning Disabled, Severe Behavior Handicapped, or Multihandicapped. The program incorporates courses from Elementary Education, Health and Physical Education, Communicative Disorders, and the College of Education Core, which emphasizes the theme "Teacher as Decision Maker." All special education programs lead to independent certification K-12.

### Developmentally Handicapped

- General Education — 45 credits:
 

	Credits
English Composition component:	
3300:111,112 English Composition I,II*	7
Mathematics component:	
3450:145 College Algebra*	4
Natural Science component:	
3100:208, 209 Human Anatomy and Physiology*	8
3370:121-138 Concepts in Geology*	1
Oral Communication component:	
7600:105 Introduction to Public Speaking*	3
or	
7600:106 Effective Oral Communication*	3
Social Sciences component:	
3850:100 Introduction to Sociology*	4
and	
Any other Social Science option, see General Education under University College for options	3
Humanities component:	
See General Education under University College for options	10
Area Studies/Cultural Diversity component:	
See General Education under University College for options	4
Physical Education component	
See General Education under University College for options	1
- Professional Education — 34 credits:
 

5050:210 Characteristics of Learners	3
5050:211 Teaching/Learning Strategies	3
5050:310 Instructional Design	3
5050:311 Instructional Resources	3
5050:320 Diversity of Learners	3
5050:330 Classroom Management	3
5050:410 Professional Issues in Education	3
5610:403 Student Teaching Colloquium: Special Education	1
5610:480 Student Teaching: Developmentally Handicapped	12
- Curriculum Content — 25 credits:
 

5200:220 Visual Arts Culture	1
5200:245 Understanding Language Literacy	3
5200:336 Teaching of Elementary School Mathematics*	3
5200:345 Teaching Language Literacy	4
5550:211 First Aid and CPR	2
5610:459 Communication and Consultation with Parents and Professionals	3
5610:461 Technology and Materials in Special Education	3
5610:463 Assessment in Special Education	3
7700:430 Aspects of Normal Language Development	3
- Specialization — 22 credits:
 

5610:440 Developmental Characteristics of Exceptional Individuals	3
5610:441 Developmental Characteristics of the Mentally Retarded	4
5610:450 Special Education Programming: Early Childhood	3
5610:451 Special Education Programming: Elementary Level	3
5610:452 Special Education Programming: Secondary/Vocational	3
5610:467 Classroom Behavior Management	3
5610:470 Clinical Practicum in Special Education	3
- Choose four credits of electives in consultation with adviser — 4 credits

### Specific Learning Disabled

- General Education — 45 credits:
 

English Composition component:	
3300:111,112 English Composition I,II*	7
Mathematics component:	
3450:145 College Algebra*	4

- |   |         |
|---|---------|
| Natural Science component:  | Credits |
| 3100:208, 209 Human Anatomy and Physiology*   | 8       |
| 3370:121-138 Concepts in Geology*   | 1       |
| Oral Communication component:   |         |
| 7600:105 Introduction to Public Speaking*   | 3       |
| or  |         |
| 7600:106 Effective Oral Communication*  | 3       |
| Social Sciences component:  |         |
| 3850:100 Introduction to Sociology*   | 4       |
| and   |         |
| Any other Social Science option, see General Education under University College for options | 3       |
| Humanities component:   |         |
| See General Education under University College for options                                  | 10      |
| Area Studies/Cultural Diversity component:  |         |
| See General Education under University College for options                                  | 4       |
| Physical Education component:   |         |
| See General Education under University College for options                                  | 1       |
- Professional Education — 34 credits:
 

5050:210 Characteristics of Learners	3
5050:211 Teaching/Learning Strategies	3
5050:310 Instructional Design	3
5050:311 Instructional Resources	3
5050:320 Diversity of Learners	3
5050:330 Classroom Management	3
5050:410 Professional Issues in Education	3
5610:403 Student Teaching Colloquium: Special Education	1
5610:481 Student Teaching: Specific Learning Disorders	12
  - Curriculum Content — 25 credits:
 

5200:220 Visual Arts Culture	1
5200:245 Understanding Language Literacy	3
5200:336 Teaching of Elementary School Mathematics*	3
5200:345 Teaching Language Literacy	4
5550:211 First Aid and CPR	2
5610:459 Communication and Consultation with Parents and Professionals	3
5610:461 Technology and Materials in Special Education	3
5610:463 Assessment in Special Education	3
7700:430 Aspects of Normal Language Development	3
  - Specialization — 21 credits:
 

5610:440 Developmental Characteristics of Exceptional Individuals	3
5610:443 Developmental Characteristics of the Specific Learning Disabled	3
5610:450 Special Education Programming: Early Childhood	3
5610:451 Special Education Programming: Elementary Level	3
5610:452 Special Education Programming: Secondary/Vocational	3
5610:467 Classroom Behavior Management	3
5610:470 Clinical Practicum in Special Education	3
  - Choose five credits of electives in consultation with adviser — 5 credits

### Severe Behavior Handicapped

- General Education — 45 credits:
 

English Composition component:	
3300:111,112 English Composition I,II*	7
Mathematics component:	
3450:145 College Algebra*	4
Natural Science component:	
3100:208, 209 Human Anatomy and Physiology*	8
3370:121-138 Concepts in Geology*	1
Oral Communication component:	
7600:105 Introduction to Public Speaking*	3
or	
7600:106 Effective Oral Communication*	3
Social Sciences component:	
3850:100 Introduction to Sociology*	4
and	
Any other Social Science option, see General Education under University College for options	
Humanities component:	
See General Education under University College for options	10
Area Studies/Cultural Diversity component:	
See General Education under University College for options	4
Physical Education component:	
See General Education under University College for options	1

\*Required for admission to the College of Education. Total of 30 credits.

\*Required for admission to the College of Education. Total of 30 credits.

• Professional Education — 34 credits:									
5050:210	Characteristics of Learners	3	5550:211	First Aid and CPR	2				
5050:211	Teaching/Learning Strategies	3	5610:459	Communication and Consultation with Parents and Professionals	3				
5050:310	Instructional Design	3	5610:461	Technology and Materials in Special Education	3				
5050:311	Instructional Resources	3	5610:463	Assessment in Special Education	3				
5050:320	Diversity of Learners	3	5610:467	Management Strategies in Special Education	3				
5050:330	Classroom Management	3	5610:470	Clinical Practicum in Special Education	3				
5050:410	Professional Issues in Education	3	7700:101	Beginning Sign Language I	3				
5610:403	Student Teaching Colloquium: Special Education	2	7700:430	Aspects of Normal Language Development	3				
5610:483	Student Teaching: Severe Behavior Handicapped	12	7700:440	Augmentative Communication	3				
• Curriculum Content — 25 credits:			• Specialization — 25 credits:						
5200:220	Visual Arts Culture	1	5610:440	Developmental Characteristics of Exceptional Individuals	3				
5200:245	Understanding Language Literacy	3	5610:441	Developmental Characteristics of the Mentally Retarded	4				
5200:336	Teaching of Elementary School Mathematics	3	5610:450	Special Education Programming: Early Childhood	3				
5200:345	Teaching Language Literacy	4	5610:451	Special Education Program: Elementary	3				
5550:211	First Aid and CPR	2	5610:452	Special Educational Programming: Secondary/Vocational	3				
5610:459	Communication and Consultation with Parents and Professionals	3	5610:453	Special Education Programming: Severely Handicapped I	3				
5610:461	Technology and Materials in Special Education	3	5610:454	Special Education Programming: Severely Handicapped II	3				
5610:463	Assessment in Special Education	3	5610:465	Neuromotor Aspects of Physical Disabilities	3				
7700:430	Aspects of Normal Language Development	3							
• Specialization — 24 credits:									
5610:440	Developmental Characteristics of Exceptional Individuals	3							
5610:446	Developmental Characteristics of Severe Behavior Handicapped	3							
5610:450	Special Education Programming: Early Childhood	3							
5610:451	Special Education Programming: Elementary Level	3							
5610:452	Special Education Programming: Secondary/Vocational	3							
5610:456	Special Education Programming: Severe Behavior Handicapped	3							
5610:467	Management Strategies in Special Education	3							
5610:470	Clinical Practicum in Special Education	3							
• Electives: Select 2-4 credits of electives from the following list in consultation with adviser:									
3750:420	Abnormal Psychology	4							
3850:430	Juvenile Delinquency	3							
7400:401	Family Life Patterns in Economically Deprived Home	2							
7500:446	Culture, Ethnicity, and Family	3							
<b>Multihandicapped</b>									
• General Education — 45 credits:									
English Composition component:									
3300:111,112	English Composition I,II*	7							
Mathematics component:									
3450:145	College Algebra*	4							
Natural Science component:									
3100:208, 209	Human Anatomy and Physiology*	8							
3370:121-138	Concepts in Geology*	1							
Oral Communication component:									
7600:105	Introduction to Public Speaking*	3							
	or								
7600:106	Effective Oral Communication*	3							
Social Sciences component:									
3850:100	Introduction to Sociology*	4							
	and								
	Any other Social Science option, see General Education under University College for options								
Humanities component:									
	See General Education under University College for options	10							
Area Studies/Cultural Diversity component:									
	See General Education under University College for options	4							
Physical Education component:									
	See General Education under University College for options	1							
• Professional Education — 34 credits:									
5050:210	Characteristics of Learners	3							
5050:211	Teaching/Learning Strategies	3							
5050:310	Instructional Design	3							
5050:311	Instructional Resources	3							
5050:320	Diversity of Learners	3							
5050:330	Classroom Management	3							
5050:410	Professional Issues in Education	3							
5610:403	Student Teaching Colloquium: Special Education	1							
5610:484	Student Teaching: Multihandicapped	12							
• Curriculum Content — 29 credits:									
5200:245	Understanding Language Literacy	3							

\*Required for admission to the College of Education. Total of 30 credits.

All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of the Dean, College of Education, Zook Hall 210, The University of Akron, Akron, OH 44325; phone (216) 972-5188.

## 5630: Bilingual Multicultural Education

This program provides education majors with the knowledge, skills and attitudes necessary to teach bilingual students. The program incorporates course work in the history and philosophy of bilingual multicultural education, linguistics, English as a second language instruction, culture and theories and practices for teaching bilingual students language arts, reading, mathematics, social studies and science.

Students may become validated in bilingual multicultural education at either the undergraduate or graduate levels in conjunction with certification in elementary education, secondary education, special education or physical education. Students must demonstrate proficiency in English and a language other than English in order to meet the validation requirements of the Ohio State Department of Education.

### • Requirements:

3300:489	Seminar in English: Introduction to Bilingual Linguistics	3
5630:482	Characteristics of Culturally Different Youth	3
5630:484	Principles of Bilingual Multicultural Education	3
5630:485	Teaching Reading and Language Arts to Bilingual Students	4
	or	
5630:486	Teaching Mathematics, Social Studies and Science to Bilingual Students	4
5630:487	Techniques for Teaching English as a Second Language in the Bilingual Classroom	4
	Field experience of bilingual classrooms/settings	3

## Combination Special Education – Elementary Education Program

The addition of 50-68 special education credits, including student teaching, to the standard elementary education degree program will provide the student with certification in the areas of teaching the developmentally handicapped, specific learning disabled, orthopedically handicapped, severe behavior handicapped or multi-handicapped. Selection of this option will require an extended program or post-baccalaureate study.

## Special Education as a Secondary Teaching Field

The addition of 57-71 special education credits, including student teaching, to the professional education courses required of secondary teachers may comprise a second teaching field in developmentally handicapped, specific learning disabled, orthopedically handicapped, severe behavior handicapped or multihandicapped.

Specific details for the above programs with elementary or secondary can be obtained from the Department of Counseling and Special Education.

## Speech and Hearing Therapy

Certification in the area of speech and hearing therapy is available to students only as part of a master's degree. Specific program details can be obtained from the Department of Counseling and Special Education and/or the Department of Communicative Disorders.

# College of Business Administration

Stephen F. Hallam, Ph.D., *Dean*  
 James E. Inman, L.L.M., *Associate Dean*  
 Kenneth E. Mast, D.B.A., *Assistant Dean, Undergraduate Programs*  
 J. Daniel Williams, D.B.A., *Assistant Dean, Graduate Programs*

## OBJECTIVES

The College of Business Administration (CBA) is a professional college of the University that is dedicated to teaching, business research, and public service. The college is accredited by the American Assembly of Collegiate Schools of Business (AACSB) and offers accredited baccalaureate and master's degree programs during the day, evenings, and weekends.

## Mission Statement

The College of Business Administration promotes economic efficiency and the free enterprise system by preparing competent and responsible business leaders through comprehensive educational programs, relevant research, and professional service.

In our free society, effective leaders are indispensable, and effective business leaders are indispensable to the free enterprise system. The CBA educates a vital component of the region's business leaders and has prepared competent and responsible business leaders working throughout the world.

## Effective Instruction

The CBA emphasizes effective teaching as the primary means to produce future business leaders. The faculty are strongly committed to being involved with CBA students, and to being accessible to them. The CBA attempts to provide relatively small class sections throughout the curriculum.

Effective teaching includes challenging our students through a variety of teaching methods. The college relies heavily upon case method, seminar presentation, skills performance methods (oral and written), discussion method, and experiential learning in addition to traditional lectures. These methods are used to: 1) involve the students actively in their own education by requiring preparation and performance; 2) instill in students the ability to educate themselves as a life-long habit; and 3) prepare students to more effectively and quickly bridge the gap to competent business leadership.

In addition, the CBA must provide students with an education in solid management skills (critical thinking, problem analysis and solving, oral and written communications, computing and specific functional competencies), people skills (compassion, self-confidence, tolerance), and ethical values (responsibility and the ability to withstand the daily pressures of management without succumbing to personal interest). Exposure to business practitioners—in and out of the classroom—assists in achieving these goals. The CBA must introduce students to a basic understanding of professionalism, public service responsibilities, and the role of business in society. This requires that students develop a respect for learning and a preference for solutions that advance the public good. Further, the CBA emphasizes creativity, open-mindedness, and diverse cultural perspectives.

Since the college's inception, the college curriculum has been designed with equal emphasis on broad basic theoretical principles as well as immediate applied practices. Classroom knowledge is consistently made more significant by visits to businesses, the college's excellent tradition of student organizations, guest speaker programs, and other efforts to bring students and business people closer together.

## COLLEGE REQUIREMENTS

### Requirements for Admission

The College of Business Administration will admit students who have completed at least 45 semester hours of credit, who meet the academic performance requirements established by the faculty of the College, and who file an application for transfer.

Academic Performance Requirements: The following coursework or equivalent must be included in the 45-hour requirement:

- 3450:145 College Algebra and 3450:215 Concepts of Calculus I
- a behavioral science course
- 3250:200 Principles of Microeconomics or 3250:201 Principles of Macroeconomics
- 6200:201 Accounting I
- Earn at least a 2.50 overall grade-point average and at least a 2.00 grade-point average in business administration and economics courses.

### Other Admissions

Students accepted into the University honors program as business majors are automatically admitted to the College of Business Administration. Incoming freshman with appropriate credentials may receive **direct admission** to the College upon application (see University Admissions in **Section Three**).

University of Akron Students who meet all criteria for admission to the College of Business Administration, except the 2.3 grade-point average, are encouraged to apply for admission on an individual case basis. In these circumstances, an admission committee will consider a number of factors for the student's benefit, including: grades in the most recent course work, grades received in pre-business courses, ACT/SAT scores, and the difficulty of a previous major. Through the consideration of these indicators, students with a good probability of success in the College of Business Administration may be admitted. Application forms and procedures may be obtained from the College office of Undergraduate Advising, located in Room 412 of the Business Administration Building. Telephone information is available at (216) 972-7040.

Transfer students from other colleges and universities must meet the same standards as University of Akron students. Students considering transfer should contact the University Office of Admissions. While transfer grades are part of the record of grades received at The University of Akron, students who need to petition for admission will also be evaluated individually on the multiple factors discussed earlier.

### Transfer of Courses and Advanced Standing

Some courses taken outside of the University College or the College of Business Administration may be accepted in lieu of college and departmental requirements. The College of Business Administration will consider the following in determining whether or not to grant credit: the content, complexity and grading standards of courses taken elsewhere and the suitability of courses taken elsewhere for the program of study chosen here. A grade of at least "C" must have been earned in any business and economics course work for transfer consideration.

Transfer students from community and technical colleges are welcome. Students are encouraged to contact The University of Akron Office of Transfer and Articulation for information on transfer acceptance as soon as they have any intention of pursuing a baccalaureate degree, and preferably before completion of the two-year program.

### Continuation of the Baccalaureate Program

#### Academic Probation

A CBA student shall be subject to academic probation if any one of the following four conditions exists:

- The accumulated GPA for all courses is less than 2.0; or
- The accumulated GPA for all CBA and Economics courses is less than 2.0; or
- The accumulated GPA in the major is less than 2.0; or
- A student violates the criteria for enrollment in upper college business courses.

## Degrees and Co-Majors

The College of Business Administration, organized on a departmental basis, offers programs of study in accounting, business administration, finance, management, marketing and advertising. A program of study leading to a co-major in international business is also offered. Six baccalaureate degrees are offered: the Bachelor of Science in Accountancy, the Bachelor of Science in Business Administration, the Bachelor of Science in Industrial Management, the Bachelor of Science in Business Administration/Finance, the Bachelor of Science in Business Administration/Marketing, and the Bachelor of Science in Business Administration/Advertising. The co-major in international business is available with each degree program.

## Requirements for Graduation

To receive a baccalaureate degree from the College of Business Administration, a student must meet the following requirements:

- Complete a minimum of 128 semester credits with a minimum 2.00 grade-point average. Not more than one credit of physical education may be included.
- At least 50 percent of the credits for graduation must be outside the College of Business Administration (6 credits in Qualitative Business Analysis I and II may be counted in the requirement for 50 percent outside the CBA).
- Obtain at least a 2.00 grade-point average for courses in the major as well as for courses in business administration and economics.
- At least 50 percent of the business credit hours required for a business degree must be earned at The University of Akron, including a minimum of 14 credits in the student's major program.
- Receive admission to the College of Business Administration and earn at least 15 credits within the college after admission is granted.
- Obtain the recommendation of the department faculty in the student's primary major.
- Complete other University requirements listed in **Section 3** of this Bulletin.
- General Education requirement of 42 credits, including:

		Credits
3250:200	Principles of Microeconomics	3
3450:145	College Algebra	4
3450:215	Concepts of Calculus I	4

Two sequential courses in psychology or sociology; or two courses chosen from psychology and/or sociology.†

In addition to the above, Accounting majors must complete the following course:

3300:275	Specialized Writing: Business	3
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Non-accounting majors, must complete:

2440:130	Basic Programming for Business or	3
3460:126	Introduction to Basic Programming	3

- Complete the following core program in business and economics:

### Accounting Majors:

6200:255	Information Processing	3
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### Non-Accounting Majors:

6200:250	Computer Applications for Business	3
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### All Majors:

3250:201	Principles of Macroeconomics	3
6200:201	Accounting Concepts and Principles for Business	3
6200:202	Managerial Accounting	3
6400:220	Legal and Social Environment of Business* or	3
6400:321.2	Business Law I, II*	6
6400:371	Business Finance	3
6500:221	Quantitative Business Analysis I	3
6500:222	Quantitative Business Analysis II	3
6500:301	Management: Principles and Concepts	3
6500:330	Principles of Operations Management	3
6500:490	Business Policy	3
6600:300	Marketing Principles	3
6800:305	International Business	3

## Minor Areas of Study

For an explanation of minor areas of study in the College of Business Administration, see **Section 5** of this Bulletin.

## Certificate Programs

The College of Business Administration offers a Certificate in Professional Selling, which is described in **Section 6** of this Bulletin.

## Cooperative Education Program

Students are encouraged to participate in the University-wide Cooperative Education Program.

The requirements are as follows:

- Attain college admissions status.
- Complete 3250:200,1 and 6200:201,2 with at least a 2.00 grade-point average.
- Apply for participation in the program through the University's director of Cooperative Education.

Three employment experiences are required, with no more than one work period in a summer. The work experience must relate to the business administration area.

## PROGRAMS OF INSTRUCTION

### 6200: Accountancy

The accountancy curriculum in the George W. Daverio School of Accountancy is designed to prepare the student for professional service, including sitting for the uniform certified public accounting examination and other professional accounting examinations and to prepare the student to undertake advanced study. The functions of accountancy are essential to the decision-making process in commerce, industry and government. Because of the important role it plays in economic affairs, accountancy has attained the professional status of law and medicine.

The three major fields of employment for accountants are public, private and governmental accounting. Regardless of the areas of concentration, standards, ethics and the mastery of accounting concepts and procedures are essential. An accounting graduate who chooses public accounting may become a senior manager, principal or partner in public accounting firms. A student who chooses an accounting career in private industry may hold the position of accountant, cost accountant, senior accountant, budget director, internal auditor, treasurer or controller. Federal, state and local governments provide a wide variety of job opportunities at the professional level for well-educated accountants. There are exceptional opportunities for professional advancement regardless of the type of institution a graduate may choose.

To receive the Bachelor of Science in Accounting degree from the George W. Daverio School of Accountancy, a student must complete the college requirements and the following School requirements:

		Credits
6200:200	Professional Orientation	1
6200:301	Cost Accounting	3
6200:320	Accounting Cycles and Financial Statements	3
6200:321	Intermediate Accounting I	3
6200:322	Intermediate Accounting II	3
6200:430	Taxation I	3
6200:440	Auditing	3
6200:454	Information Systems	3
6200:460	Advanced Managerial Accounting	3

In addition to the required accounting courses listed above, a student must take six additional elective accounting (6200) credits.

Communication skills are vital, so a major is required to take 3300:275, Specialized Writing in Business, and encouraged to participate in the Student Toastmasters organization.

### 6400: Finance

The primary mission of the Department of Finance is to provide a quality education to students that will prepare them for leadership positions within the finance profession in business and government. Students acquire financial knowledge and skills that can be applied in a variety of environments. The study of finance prepares students to understand the financial transactions in today's global economy. Careers in finance include corporate finance, investment management, financial markets and institutions, and personal financial services.

Careers in corporate finance include financial analyst positions in manufacturing, commercial, and service enterprises where initial assignments might include financial planning, capital expenditure analysis, cash management, credit management, lease evaluation, mergers and acquisitions, and special projects. Students with an interest in investment management are trained for careers as account executives, security analysts, or portfolio managers in bank trust departments, securities brokerage firms, investment research firms, and investment banks. Careers in financial markets and institutions are available in banking, mutual funds, insurance companies, and other financial institutions. Banking careers

† 3870:150 can substitute for 3850:100.

\* Accountancy majors take 6400:321,2 or 6400:220. Other majors take 6400:220.

include commercial lending, retail banking, treasury operations, trading, and trust operations. The rapidly expanding financial services field includes careers in personal financial planning, real estate, and insurance.

The finance curriculum offers students the opportunity to study in one of two specific areas of specialization – Corporate Financial Management and Financial Services. Students in the Financial Services program may also achieve a Concentration in Real Estate.

All finance majors must complete four required major courses with an average grade of C over the four courses:

• Finance Core:		Credits
6400:290	Career Planning and Analysis	1
6400:338	Financial Markets and Institutions	3
6400:343	Investments	3
6400:379	Advanced Business Finance	3

### Corporate Financial Management Program

In addition to the required four courses (10 credits) above, the following courses, one required and four electives, comprise the Finance Major, Corporate Financial Management Program:

• Required		
6400:485	Financial Strategy	3

#### • Electives

Select four elective courses (three must be 6400 courses) totaling at least 12 credits from the following:

6400:436	Commercial Bank Management	3
6400:447	Security and Portfolio Analysis	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial and Consumer Credit Management	3
6400:481	International Business Finance	3
6400:490	Selected Topics in Finance	1-3
6400:495	Internship in Finance	1-3
6400:497	Honors Project	1-3
6200:301	Cost Accounting	3
6200:320	Accounting Cycles and Financial Statements	3

### Financial Services Program

In addition to the required core courses (10 credits) above, select at least five (5) courses (at least 15 credits) for the Finance Major, Financial Services Program:

6400:323	International Business Law	3
6400:325	Business and Society	3
6400:332	Personal Financial Planning	3
6400:390	Real Estate Principles: A Value Approach	3
6400:401	Real Estate Investment	3
6400:402	Income Property Appraisal	3
6400:403	Real Estate Finance	3
6400:413	Property and Liability Insurance	3
6400:414	Life and Health Insurance	3
6400:415	Risk Management and Insurance	3
6400:424	Legal Concepts of Real Estate: A Managerial Approach	3
6400:436	Commercial Bank Management	3
6400:447	Security and Portfolio Analysis	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial and Consumer Credit Management	3
6400:481	International Business Finance	3
6400:490	Selected Topics in Finance	3
6400:495	Internship in Finance	1-3
6400:497	Honors Project	1-3
6200:410	Taxation for the Non-Accountant	3

### Financial Services Program – Real Estate Concentration

A finance major completing the Financial Services Program with at least three of the five courses below (9 credits) will be awarded a Concentration in Real Estate:

6400:390	Real Estate Principles: A Value Approach*	3
6400:401	Real Estate Investment	3
6400:402	Income Property Appraisal*	3
6400:403	Real Estate Finance*	3
6400:424	Legal Concepts of Real Estate: A Managerial Approach*	3

## 6500: Management

The University of Akron was one of the first institutions of higher learning to establish an industrial management curriculum. Important factors in the decision to establish such a program were the location of the University in a major industrial area and the recognition of an emerging educational need.

The emphasis on education for management is the result of several factors. First, managers are becoming increasingly aware that a professional approach to management requires understanding of quantitative methods, the behavioral sciences and the use of computers. Second, the management task is becoming much more complex in terms of the number of activities, volume of work and the broader impact of managerial decisions. Third, the practice of management in any setting requires a measure of specific preparation and qualification.

Events of the past several years have brought about a rapid and sweeping change in the business and industry of our society. The major in industrial management reflects the complex directional problems of firms involved in manufacturing and/or service in a highly competitive and interactive global economy. The curriculum is designed to provide the student with a solid foundation in management. It also allows the student to emphasize a specific area of study by pursuing one of the management options.

The graduate with an industrial management degree finds many employment opportunities with firms in staff, supervisory and other management positions. The graduate possesses, in addition, the required basic understanding for effectively managing facilities, equipment and personnel in a variety of activities such as transportation, warehousing, research or institutional management. Also, the graduate has the fundamental preparation to undertake advanced study leading to a master's degree.

To receive the Bachelor of Science in Industrial Management with a major in management, a student must complete the common college Requirements for Graduation, and the requirements of one of the six options listed below:

### Human Resource Management Option

• Core Requirements for Graduation (30 credits)		Credits
• Option Requirements (18 credits):		
6500:310	Business Information Systems	3
6500:341	Human Resource Management	3
6500:342	Labor Relations	3
6500:442	Compensation Management	3
6500:443	Advanced Human Resource Management	3
6500:471	Management Project	
	or	
6500:473	Human Resource Management Project	3
• Management Electives (4 credits)		<u>4</u>
		22

### Production/Operations Management Option

• Core Requirements for Graduation (30 credits)		
• Option Requirements (21 credits):		
6500:310	Business Information Systems	3
6500:331	Production Systems Analysis I	3
6500:341	Human Resource Management	3
6500:433	Business Operational Planning	3
6500:434	Production Planning and Control	3
6500:435	Quality Control	3
6500:471	Management Project	
	or	
6500:472	Production/Operations Management Project	3
• Management Electives (4 credits)		<u>4</u>
		25

\* 6400:390, 402, 403 and 424 are accepted by the Ohio Real Estate Commission to satisfy course work necessary for the Ohio License requirement.

### Materials Management Option

• Core Requirements for Graduation (30 credits)		Credits
• Option Requirements (21 credits):		
6500:310 Business Information Systems	3	
6500:331 Production Systems Analysis I	3	
6500:341 Human Resource Management	3	
6500:434 Production Planning and Control	3	
6500:435 Quality Control	3	
6500:471 Management Project	3	
6600:370 Purchasing	3	
6600:415 Business Logistics	3	
• Management Electives (4 credits)	<u>4</u>	
	28	

### Industrial Accounting Option

• Core Requirements for Graduation (30 credits)*		
• Option Requirements (21 credits):		
6500:310 Business Information Systems**	3	
6500:331 Production Systems Analysis I	3	
6500:341 Human Resource Management	3	
6500:433 Business Operational Planning	3	
6500:434 Production Planning and Control	3	
6500:435 Quality Control	3	
6200:301 Cost Accounting	3	
6200:460 Advanced Managerial Accounting	3	
• Management Electives (4 credits)	<u>4</u>	
	28	

### Quality Management Option

• Core Requirements for Graduation (30 credits)		
• Option Requirements (21 credits):		
6500:310 Business Information Systems	3	
6500:331 Production Systems Analysis I	3	
6500:341 Human Resource Management	3	
6500:435 Quality Control	3	
6500:436 Advanced Quality Control Applications	3	
6500:438 Product Quality Design Techniques	3	
6500:471 Management Project	3	
• Management Electives (4 credits)	<u>4</u>	
	25	

### Information Systems Management Option

• Core Requirements for Graduation (30 credits)		
• Option Requirements (21 credits):		
6500:310 Business Information Systems	3	
6500:324 Data Management for Information Systems	3	
6500:325 Analysis and Design of Information Systems	3	
6500:331 Production Systems Analysis I	3	
6500:341 Human Resource Management	3	
6500:425 Decision Support and Expert Systems	3	
6500:471 Management Project	3	
• Management Electives (4 credits)	<u>4</u>	
	25	

### 6600: Marketing

Marketing is concerned with exchange – the process by which individuals or organizations provide or receive anything of value. The American Marketing Association defines marketing as “the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives.” While marketing was traditionally considered a business function actively practiced only by for-profit corporations, it is now generally accepted that a marketing perspective and the use of marketing techniques can improve the operation of any organization, including not-for-profit organizations, government agencies, and other groups and individuals who were not historically thought to be among the users of marketing concepts and practices.

Given the rather broad and encompassing view of marketing, it is not surprising that a significant proportion of the workforce is employed in some aspect of the various marketing functions and activities. While job opportunities are diverse, some of the more common areas of employment include retail merchandising and management, product development and planning, physical distribution and logistics, marketing communications and advertising, industrial purchasing, and marketing research. In addition, a significant proportion of marketing graduates launch and pursue very successful careers in professional sales and sales management within the business to business sector of the economy. Consequently, the Department of Marketing offers a specialized program in Sales Management in addition to its program in Marketing Management.

Our majors must meet all requirements of 1) the General Education program, 2) the Pre-Business program, 3) the College of Business Administration Core program, 4) the required courses within each program, and 5) the elective courses within each program.

To receive a Bachelor of Science in Business Administration/Marketing degree, the student must select either the Marketing Management Program or the Sales Management Program and successfully complete one or the other of these 26-credit-hour programs.

### Marketing Management Program

• Required: Complete all courses — 8 credits		Credits
6600:293 Career Orientation		1
6600:460 Marketing Research		3
6600:490 Marketing Strategy		3
6600:493 Career Management		1
• Electives: Complete an additional 18 credits		
Please select any additional 18 credits in Marketing (6600), except for: 6600:491 Workshop in Marketing or 6600:499 Independent Study in Marketing.		

### Sales Management Program

• Required: Complete all courses — 20 credits		
6600:293 Career Orientation		1
6600:370 Purchasing		3
6600:375 Professional Selling		3
6600:460 Marketing Research		3
6600:470 Business To Business Marketing		3
6600:480 Sales Management		3
6600:490 Marketing Strategy		3
6600:493 Career Management		1
• Electives: Complete an additional 6 credits		
Please select any additional 6 credits in Marketing (6600), except for: 6600:491 Workshop in Marketing or 6600:499 Independent Study in Marketing.		

\* 6200:255 may be substituted for 6200:250

\*\* 6200:454 may be substituted for 6500:310

## Advertising

Advertising majors can obtain advertising positions with manufacturers, retailers, service and nonprofit organizations, advertising agencies, advertising specialty houses such as market research firms or with such advertising vehicles as newspapers, magazines, radio or television stations, direct mail operations, and telemarketing firms. While the focus of this program is on advertising (the indirect, impersonal communications carried by a mass medium and paid for by an identified sponsor), students will also explore other elements of the "promotional mix" including sales promotions, publicity, personal selling and visual merchandising. Some of the more frequently obtained advertising positions include media buyer, media planner or supervisor, advertising accounts manager, copywriter and creative director, sales representative, and a host of other entry level positions within the promotions field. Advanced career paths in advertising and promotions would involve managerial responsibilities over the above mentioned positions.

An advertising major must meet all requirements of: (1) the General Studies Program, (2) the Pre-Business Program, (3) the College of Business Administration Core Courses Program, (4) the Advertising Major Required Courses Program, and (5) the Advertising Major Elective Courses Program.

To receive a Bachelor of Science in Business Administration/Advertising degree, the student must successfully complete the following 23 credit hour program:

• Required: Complete all courses - 17 credits		<i>Credits</i>
6600:293	Career Orientation	1
6600:350	Advertising	3
6600:355	Buyer Behavior	3
6600:425	Advertising Research And Evaluation	3
6600:430	Promotional Campaigns	3
6600:490	Marketing Strategy	3
6600:493	Career Management	1
• Electives: Complete two courses - 6 credits. At least one of the two electives courses must be selected from 3300, 7100, and/or 7600 fields of study.		
3300:390	Professional Writing	3
7100:180	Graphic Design	3
6600:375	Professional Selling	3
6600:385	International Marketing	3
6600:440	Product Planning	3
6600:450	Strategic Retail Management	3
6600:480	Sales Management	3
7600:280	Media Production Techniques	3
7600:282	Radio Production	3
7600:283	Television Production	3
7600:387	Radio And Television Writing	3
7600:486	Broadcasting Sales And Management	3

## 6800: International Business

The dynamic changes in the world's physical, political, economic, and cultural environments are resulting in threats to the well being of both individuals and organizations, as well as creating totally new market opportunities for business firms and enterprises. The challenge is to effectively compete in the global marketplace as it exists today and develops tomorrow. This academic program views international business in the broad content of all business transactions devised and carried out across national borders to satisfy the organizational and personal goals of firms and individuals. International business studies incorporates all of the functional business operations of accounting, finance, management, and marketing, as such, it is an integrative field of study within an international framework. Given the growth and complexity of international business activities and practices, career opportunities are available and rewarding. Entry into international business careers is best accomplished by first securing a functional area position (accounting, finance, management, or marketing) within a business organization and then moving into the firm's international operations. This preferred career path and its associated employment opportunities are the reasons why the international business program is structured as a co-major with one of the functional areas of business.

## 6800: International Business Co-Major

The International Business Co-Major requires that each student successfully complete all requirements for a Bachelor of Science in Business Administration in one of the following functional areas of business: Accounting, Finance, Management, Marketing or Advertising (see Undergraduate General Bulletin for degree requirements). In addition to the functional area's major degree requirements, each student must successfully complete the course requirements in each of the following International Business components:

• Required International Business Courses:		<i>Credits</i>
(Complete all courses — 5 credits)		
6600:293	Career Orientation	1
6600:493	Career Management	1
6800:405	Multinational Corporations	3
• Elective International Business Courses:		
(Complete two courses — 6 credits)		
6400:323	International Business Law	3
6400:481	International Business Finance	3
6500:457	International Management	3
6600:385	International Marketing	3
6800:421	International Business Practices	3
• Elective Interdisciplinary Courses:		
(Complete three courses — 9 credits)		
3250:450	Comparative Economic Systems	3
3250:460	Economic Development & Planning For Underdeveloped Nations	3
3250:461	Principles of International Economics	3
3350:450	Development Planning in the Third World	3
3700:300	Comparative Politics	4
3700:310	International Politics And Institutions	4
3700:321	Western European Politics	3
3700:322	Soviet and European Politics	3
3700:323	Politics of China and Japan	3
3700:312	The Politics Of International Trade And Money	3
3700:326	Politics Of Development Nations	3
3870:270	Cultures Of The World	3
• Required Foreign Language Component:		
(Complete One Language Sequence — 14 credits)		
3520:xxx	French Language	
3520:101	Beginning French I	4
3520:102	Beginning French II	4
3520:201	Intermediate French I	3
3520:202	Intermediate French II	3
3530:xxx	German Language	
3530:101	Beginning German I	4
3530:102	Beginning German II	4
3530:201	Intermediate German I	3
3530:202	Intermediate German II	3
3550:xxx	Italian Language	
3550:101	Beginning Italian I	4
3550:102	Beginning Italian II	4
3550:201	Intermediate Italian I	3
3550:202	Intermediate Italian II	3
3570:xxx	Russian Language	
3570:101	Beginning Russian I	4
3570:101	Beginning Russian II	4
3570:201	Intermediate Russian I	3
3570:202	Intermediate Russian II	3
3580:xxx	Spanish Language	
3580:101	Beginning Spanish I	4
3580:102	Beginning Spanish II	4
3580:201	Intermediate Spanish I	3
3580:202	Intermediate Spanish II	3

Other languages can be used to fulfill the language requirement. In such cases, competency exams are approved and administered by the Department of Modern Languages.

• Required Geography Component:		
(Complete one course — 3 credits)		
3350:320	Economic Geography	3
3350:353	Latin America	3
3350:356	Europe	3
3350:358	USSR	3
3350:360	Asia	3
3350:363	Africa South of the Sahara	3

# College of Fine and Applied Arts

Linda Moore, Ph.D., *Dean*  
 DuWayne H. Hansen, D.M.E., *Associate Dean*  
 William Seaton, Ph.D., *Associate Dean*

## OBJECTIVES

The purpose of the College of Fine and Applied Arts is to further the objectives of the University by providing a quality program of undergraduate and graduate education with artistic, technological, clinical performance, research and studio experience in the fine and applied arts, as well as:

- To maintain curricula for the preparation of a student majoring in these areas.
- To prepare a student for graduate study and career opportunities on a professional competence level.
- To provide instruction designed to meet specific curricular needs of all the colleges of the University.
- To serve the elective interests of the student seeking diversity and enrichment in academic programs.
- To encourage the development of technical knowledge and professional skills which underlie the communicative functions of human expression.
- To nurture and expand, through this congregation of the arts, not only a knowledge of creative and cultural heritage but also a perceptual and aesthetic awareness of direct sensory experience through creation and performance.

The college recommends each student for the appropriate bachelor's or master's degree in accordance with the student's specialization.

## COLLEGE REQUIREMENTS

### Requirements for Admission

To be admitted to the College of Fine and Applied Arts, the student must have completed at least 30 credits of work with at least a 2.30 grade-point average or above and have the approval of the dean. A student transferring to the School of Art from another institution must submit a portfolio of work for approval before admission. A student transferring from another college or institution into the music program must submit to a placement examination and an audition. The longer and more professionally oriented programs should be started during the first or second year when the student is still under the guidance of the Office of Academic Advising. The shorter majors need not be declared before the student is ready for transfer to the college. At the time of admission to the college, the student is assigned an adviser by the Director of the School.

### Requirements for Baccalaureate Degrees

- Compliance with University requirements, **Section 3** of this Bulletin.
- Completion of a major program of instruction (see below).
- Electives consisting of courses offered for credit in the University's four-year degree programs, provided that the prerequisites as set forth in this Bulletin are met, and further provided that not more than two credits of physical education activities, eight credits of applied music or four credits of music organizations are included. (Credit limitations on applied music and music organizations do not apply to the Bachelor of Music degree.) While credits from another institution or college may be accepted, application toward graduation will depend upon the nature of the student's program of study.
- The recommendation of the director of the student's major school.
- Demonstrated ability to use English. One other language may be required depending upon the degree program.

## Degrees

The following baccalaureate degrees are granted in the College of Fine and Applied Arts:

- Bachelor of Arts in Studio Art, Art History
- Bachelor of Fine Arts in Studio Art (Ceramics, Drawing, Graphic Design, Metalsmithing, Painting, Photography, Printmaking, Sculpture)
- Bachelor of Arts: Family and Child Development, Food Science, Pre-Kindergarten, Child-Life Specialist
- Bachelor of Arts in Clothing, Textiles and Interiors:
  - Business Option, Interio Design Option, Theatre Option
- Bachelor of Science in Dietetics
- Bachelor of Science in Home Economics Education
- Bachelor of Arts in Music
- Bachelor of Music in Performance, History and Literature, Theory/Composition, Jazz Studies, and Music Education
- Bachelor of Arts in Communication
- Bachelor of Arts in Business and Organizational Communication, Communication/Rhetoric, Mass Media-Communication
- Bachelor of Arts in Communicative Disorders
- Bachelor of Arts in Social Work
- Bachelor of Arts/Social Work
- Bachelor of Arts in Theatre Arts
- Bachelor of Arts in Dance
- Bachelor of Fine Arts in Dance

## Graduation Requirements

A student must earn a major in a school of the college. A major consists of 24 to 62 credits in addition to the required General Education and, in the case of the Bachelor of Arts degree, foreign language courses. Part or all of these credits may be taken in specifically required courses depending upon the major. The exact requirements for each major will be found on the following pages in the section headed "Programs of Instruction."

## Minor Areas of Study

For an explanation of minor areas of study in the College of Fine and Applied Arts, see **Section 5** of this Bulletin.

## PROGRAMS OF INSTRUCTION

### 7100: Art

#### Bachelor of Arts

- Two years of a foreign language as required by major.
- Completion of studio or art history option as required by major.
- Electives — 6-25 credits.
- 7100:200 Survey of History of Art I, 7100:201 Survey of History of Art II, 7100:210 Visual Arts Awareness (included in General Education), and elective in art history course(s) as required by major.

#### Studio Art Option

- General Education (including 7100:210 Visual Arts Awareness) — 42 credits
- Completion of the second year of a foreign language or the following courses in American Sign Language — 14 credits:

		<i>Credits</i>
7700:101	Beginning Sign Language I	3
7700:102	Beginning Sign Language II	3
7700:201	Intermediate Sign Language	3
7700:202	Advanced Sign Language	3
7700:222	Survey of Deaf Culture in America	2

- Studio art coursework, including one course in each of six different areas of emphasis: e.g., printmaking, sculpture — 41 credits.
- Survey of History of Art I and II (7100:200,201) plus one additional advanced-level art history course — 11 credits.

#### History of Art Option (Second-year of a foreign language required)

- General Education (including 7100:210 Visual Arts Awareness) — 42 credits
- History of art including 7100:200,201 Survey of History of Art, one history of art symposium, one special problems in history of art course, one special topics in history of art — 38 credits.
- Studio art course work to include at least four different areas of emphasis: e.g., painting, photography (7100:275 recommended) — 12 credits.

**Bachelor of Fine Arts**

- General Education requirement — 42 credits.

- Foundations Curriculum in Art

		Credits
7100:200	Survey of History of Art I	4
7100:201	Survey of History of Art II	4
7100:121	Three-Dimensional Design	3
7100:131	Introduction to Drawing	3
7100:132	Instrument Drawing	3
7100:144	Two-Dimensional Design	3
	or	
7100:286	Graphic Design II (for graphic design emphasis students)	3
7100:233	Life Drawing	3
7100:250	Portfolio Review	0
7100:210	Visual Arts Awareness	3

- Electives — 6-9 credits.

- Two advanced-level art history courses (one for graphic design emphasis students).

- Senior exhibition: Student must secure a faculty adviser in the area of emphasis during the first week of the semester the student plans a senior show. The exhibition must be approved by the adviser prior to presentation.

- Portfolio review as specified for student's area of emphasis.

- Studio art courses must include one area of major emphasis as described below, plus studio electives to equal no less than 68 credits.

**Ceramics**

7100:222	Introduction to Sculpture	3
7100:231	Drawing II	3
7100:254	Ceramics I	3
7100:354	Ceramics II	3
7100:454	Advanced Ceramics (to be repeated)	15
7100:495	Senior Exhibition	0

**Drawing**

7100:231	Drawing II	3
7100:491	Architectural Presentations I	3
	or	
7100:283	Drawing Techniques	3
7100:331	Drawing III	3
7100:333	Advanced Life Drawing (to be repeated)*	6
7100:431	Drawing IV (to be repeated)*	6
7100:	Printmaking	3
7100:495	Senior Exhibition	0

**Graphic Design**

2240:122	Introduction to Commercial Photography	3
7100:184	Graphic Design I	3
7100:185	Computer Graphics for Art I	3
7100:231	Drawing II	3
7100:275	Introduction to Photography	3
7100:283	Drawing Techniques	3
7100:286	Graphic Design II	3
7100:288	Letterform and Typography	3
7100:384	Graphic Design Portfolio Review	0
7100:386	Packaging Design	3
7100:387	Advertising Layout Design	3
7100:388	Advertising Production and Design	3
7100:482	Corporate Identity and Graphic Systems	3
7100:484	Illustration	3
7100:485	Advanced Illustration	3
7100:488	Publication Design	3
7100:483	Graphics Portfolio Presentations	3
7100:495	Senior Exhibition	0

**Metalsmithing**

2920:247	Technology of Machine Tools	3
7100:222	Introduction to Sculpture	3
7100:266	Introduction to Metalsmithing	3
7100:268	Color in Metals	3
7100:366	Metalsmithing II	3
7100:466	Advanced Metalsmithing (to be repeated)**	12
7100:467	Metalsmithing Portfolio Review	0
7100:495	Senior Exhibition	0
7100:283	Drawing Techniques	3
	or	
7100:231	Drawing II	3

\* Required to be repeated once for drawing emphasis students only. (6 credits total).

\*\* May take one 7100:368 Color in Metals II in place of one 7100:466.

**Painting**

7100:231	Drawing II	3
7100:245	Introduction to Polymer Acrylic Painting	3
7100:246	Introduction to Watercolor Painting	3
7100:247	Introduction to Oil Painting	3
7100:348	Painting II (to be repeated in different media)	6
7100:449	Advanced Painting (to be repeated)	6
7100:495	Senior Exhibition	0

**Photography**

2240:122	Introduction to Commercial Photography	3
3650:137	Light	3
7100:___	Printmaking	3
7100:231	Drawing II	3
7100:275	Introduction to Photography	3
7100:370	History of Photography	3
7100:375	Photography II	3
7100:475	Advanced Photography (to be repeated)	9
7100:477	Advanced Photography: Color	3
7100:495	Senior Exhibition	0

**Printmaking**

7100:213	Introduction to Lithography	3
7100:214	Introduction to Screen Printing	3
7100:215	Introduction to Relief Printing	3
7100:216	Introduction to Intaglio Printing	3
7100:231	Drawing II	3
	Two of the following:	
7100:275	Introduction to Photography	3
7100:375	Photography II	3
7100:317	Printmaking II (may be repeated)	3
7100:418	Advanced Printmaking (may be repeated)	3
	One of the following:	
7100:245	Introduction to Acrylic Painting	3
7100:246	Introduction to Watercolor Painting	3
7100:247	Introduction to Oil Painting	3
7100:495	Senior Exhibition	0

**Sculpture**

7100:222	Introduction to Sculpture	3
7100:231	Drawing II	3
7100:254	Introduction to Ceramics	3
	or	
7100:266	Introduction to Metalsmithing	3
7100:321	Figurative Sculpture	3
7100:322	Sculpture II	3
7100:420	Sculpture Portfolio Review	0
7100:422	Advanced Sculpture (to be repeated)	9
7100:323	Casting	3
7100:495	Senior Exhibition	0

**Art Education**

A student wishing state teachers certification has several degree options; further information can be obtained from the School of Art and in the College of Education.

**7400: Home Economics and Family Ecology\***

The mission of the School of Home Economics and Family Ecology is to prepare professionals to take leadership positions as generalists and specialists in the areas of home economics. These include dietetics, family and child development, child life, foods and nutrition, clothing, textiles and interiors and vocational home economics education. Graduates are employed in public and private sectors in retailing, health and human services, dietetics, nutrition education and counseling, commercial and interior design, child care in hospital and community settings, food product development and food service administration.

- General Education Requirement — 42 credits.\*\*

- Home Economics and Family Ecology Core:

All students enrolled in baccalaureate programs in the School of Home Economics and Family Ecology are required to complete the following core of requirements:

7400:147	Orientation to Professional Studies in Home Economics & Family Ecology	1
7400:447	Senior Seminar: Critical Issues in Professional Development	1

\* The second year of a foreign language is an optional requirement for the School of Home Economics and Family Ecology. Please consult with the adviser in the proper degree area for options available.

\*\* The University College's General Education requirement for the Bachelor of Science in Dietetics and the Bachelor of Arts in Food Science is 45 credits. The additional three credits come from the use of 3150:129,30 General Chemistry (eight credits) to meet the natural science requirements, and from the use of 3850:100 Introduction to Sociology (four credits) and 3250:100 Introduction to Economics (three credits) to meet the Social Studies requirement. The above mentioned courses met American Dietetic Association requirements.

One course to be chosen from each of the following divisions outside the area of specialization:

	Credits
<b>Clothing, Textiles and Interiors:</b>	
7400:121 Textiles	3
7400:259 Family Housing	3
7400:219 Clothing Communication	3
<b>Family and Child Development:</b>	
7400:201 Courtship, Marriage and the Family	3
7400:265 Child Development	3
<b>Foods and Nutrition:</b>	
7400:133 Nutrition Fundamentals†	3
7400:141 Food for the Family	3
<b>Management:</b>	
7400:362 Family Life Management	3

## Bachelor of Arts in Family and Child Development

This degree offers the following emphases: family development, child development, pre-kindergarten teaching certification and child-life specialist. Students interested in pre-kindergarten teaching certification should consult an adviser from the School of Home Economics and Family Ecology during first semester freshman year. In addition to departmental requirements listed under 7400: Home Economics and Family Ecology, a student must complete one of the following options:

### Family Development

3750:100 Introduction to Psychology	3
3750:230 Developmental Psychology	4
7400:201 Courtship, Marriage and the Family	3
7400:255 Fatherhood: The Parent Role	3
7400:265 Child Development	3
7400:301 Consumer Education	3
7400:360 Parent-Child Relations	3
7400:390 Family Relationships in Middle and Later Years	3
7400:401 Family-Life Patterns in Economically Deprived Home	2
7400:404 Adolescence in the Family Context	3
7400:406 Family Financial Management	3
7400:440 Family Crisis	3
7400:442 Human Sexuality	3
7400:445 Public Policy and The American Family	3
7400:496 Parenting Education	3
7400:497 Internship in Home Economics	5
7750:276 Introduction to Social Welfare	4
Electives selected in consultation with adviser	9

### Child Development

2200:245 Infant/Toddler Day-Care Programs	3
2200:250 Observing and Recording Child Behavior	3
5200:310 Introduction to Early Childhood	3
5200:315 Issues and Trends in Early Childhood Education	3
5200:360 Teaching in the Nursery Center	2
5200:370 Nursery Center Laboratory	2
5850:295 Education Technician Field Experience	5
or	
7400:497 Internship in Home Economics	5
7400:132 Early Childhood Nutrition	2
7400:201 Courtship, Marriage and the Family	3
7400:255 Fatherhood: The Parent Role	3
7400:265 Child Development	3
7400:270 Theory and Guidance of Play	3
7400:280 Creative Activities for Pre-Kindergarten Children	4
7400:303 Children As Consumers	3
7400:360 Parent-Child Relations	3
7400:401 Family-Life Patterns in Economically Deprived Home	2
7400:404 Adolescents in the Family Context	3
7400:460 Organization and Supervision of Child-Care Centers	3
Electives selected in consultation with adviser	9

### Pre-Kindergarten Certification:

2200:245 Infant/Toddler Day Care Programs	3
2200:250 Observing & Recording Children's Behavior	3
3850:340 The Family	3
3850:344 The Sociology of Sex Roles	3
3850:412 Socialization: Child to Adult	3
5200:200 Pre-Kindergarten Participation	1
5200:300 Pre-Kindergarten Participation	1
5200:310 Introduction to Early Childhood	3
5200:315 Issues and Trends in Early Childhood Education	3
5200:355 Language and Literacy in Early Childhood Education	3
5200:360 Teaching in the Nursery Center	2
5200:370 Nursery Center Laboratory	2

† Required for B.S. in dietetics and B.A. in food science.

5200:403 Student Teaching Seminar	1
5200:495 Student Teaching	8
5500:336 Motor Learning and Development for Early Childhood	2
5610:450 Special Education Programming: Early Childhood	3
7400:132 Early Childhood Nutrition	2
7400:265 Child Development	3
7400:270 Theory and Guidance of Play	3
7400:280 Creative Activities for Pre-Kindergarten Children	4
7400:303 Children as Consumers	3
7400:360 Parent-Child Relations	3
7400:401 Family Life Patterns: Economically Deprived Home	2
7400:404 Adolescent in the Family Context	3
7400:448 Before and After School Care	2
7400:460 Organization and Supervision of Child Care Centers	3
Electives	4

### Child-Life Specialist

3750:100 Introduction to Psychology	3
2740:120 Medical Terminology	3
3750:430 Psychological Disorders of Children	4
5200:360 Teaching in Nursery School	2
5200:370 Nursery Center Laboratory	2
5600:450 Counseling Problems Related to Life Threatening Illness and Death	3
5610:440 Developmental Characteristics of Exceptional Individuals	3
7400:270 Theory and Guidance of Play	3
7400:280 Creative Activities for Pre-Kindergarten Children	4
7400:404 Adolescence in the Family Context	3
7400:451 The Child in the Hospital	4
7400:455 Practicum: Establishing and Supervising a Child-Life Program Centers	3
7400:484 Orientation to the Hospital Setting	2
7400:495 Internship: Guided Experience in a Child-Life Program	8
7400:496 Parent Education	3
Electives selected in consultation with adviser	11

## Bachelor of Arts in Food Science

In addition to school requirements listed under 7400: Home Economics and Family Ecology, the student must complete the following courses:

### • Core

(A minimum grade of C (2.00) required)

7400:245 Food Theory and Application I	3
7400:246 Food Theory and Application II	3
7400:403 Advanced Food Preparation	3
7400:420 Experimental Foods	3

### • Supporting Discipline Requirements:

2280:233 Restaurant Operations and Management	4
or	
7400:310 Food Systems Management I	5
and	
7400:315 Food Systems Management I, Clinical	2
2440:120 Computer and Software Fundamentals	2
3100:130 Principles of Microbiology	3
3750:100 Introduction to Psychology	3
6500:301 Management Principles and Concepts	3
6600:300 Marketing Principles	3
7400:301 Consumer Education	3
7400:316 Science of Nutrition,	4
7400:497 Internship in Home Economics and Family Ecology	5
7400:340 Meal Service	2
7400:450 Demonstration Techniques	2
7400:497 Internship: Food Science	5

### • Food Science Electives:

(Students select one or more of the following upper division Food Science courses. A minimum grade of C is required.)

7400:470 The Food Industry: Analysis and Field Study	3
7400:474 Cultural Dimensions of Food	3
7400:475 Analysis of Food	3
7400:476 Developments in Food Science	3
Language or Language Option Requirements:	14
General Electives:	7-10

**Bachelor of Arts in Clothing, Textiles, and Interiors**

The Clothing, Textiles, and Interiors Division offers a Bachelor of Arts degree with emphasis in three areas: Business Option, Interior Design Option, and Theatre Costume Option. In addition to departmental requirements listed under 7400: Home Economics and Family Ecology, a student must complete one of the following options:

**Business Option**

The Business Option emphasizes study in textiles, fashion merchandising and marketing, textile product analysis, historic costume, social-cultural aspects of dress, and apparel construction. The College of Business Administration and/or the Community and Technical College compliments the Business Option by providing study in areas such as accounting, marketing, promotion, and retailing.

The program prepares students for careers in the fashion and furnishings industries. Entry-level positions include assistant store manager, assistant buyer, executive management trainee, product development assistant, manufacturer's representative, visual merchandiser, fashion consultant, and personal shopping specialist.

• Core:		Credits
6200:201	Accounting I	4
	or	
2420:211	Basic Accounting I	3
6600:300	Marketing Principles	3
	or	
2420:101	Elements of Distribution	3
6600:340	Retail Management	3
	or	
2520:202	Retailing Fundamentals	3
6600:350	Advertising	3
	or	
2520:103	Principles of Advertising	3
7400:121	Textiles	3
7400:123	Fundamentals of Construction	3
7400:158	Introduction to Interior Design	3
7400:219	Clothing Communications	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:239	The Fashion and Furnishings Industries	3
7400:302	Consumers of Services	3
7400:425	Advanced Textiles	3
7400:437	Historic Costume to 1800	3
7400:438	History of Fashion since 1780	3

• Electives: Student must select 15 hours from the following courses.

7400:303	Children as Consumers	3
7400:305	Advanced Construction and Tailoring	3
7400:311	Contemporary Needle Arts	3
7400:352	Strategic Merchandise Planning	3
7400:418	History of Interior Design I	4
7400:419	History of Interior Design II	4
7400:423	Professional Image Analysis	3
7400:427	Textile and Apparel Industries	3
7400:436	Textile Conservation	3
7400:439	Fashion Analysis	3
7400:449	Flat Pattern Design	3
7400:485	Seminars (only CTI)	3
7400:490	Workshops (only CTI)	3
7400:497	Fashion Retailing Internship	3

**Theatre Costume Option**

Students interested in this option should consult with an advisor from the Clothing, Textiles, and Interiors Division for information about the program.

• Core:		Credits
7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7400:121	Textiles	3
7400:123	Fundamentals of Construction	3
7400:219	Clothing Communication	3
7400:305	Advanced Construction and Tailoring	3
7400:418	History of Interior Design I	4
	or	
7400:419	History of Interior Design II	4
7400:437	Historic Costume to 1800	3
7400:438	History of Fashion Since 1780	3
7400:449	Flat Pattern Design	3
7800:100	Experiencing Theater	3
7800:107	Introduction to Stage Costume Techniques	3
7800:307	Advanced Costume Techniques	3
7800:337	Stage Costume History and Design I	3
7800:338	Stage Costume History and Design II	3

• Electives: (Student must select 12 hours from the following courses)

7100:233	Life Drawing	Credits
7400:239	Fashion and Furnishings Industries	3
7400:311	Contemporary Needle Arts	3
7400:423	Professional Image Analysis	3
7400:432	Textile Conservation	3
7400:439	Fashion Analysis	3
7400:485	Seminars	3
7400:490	Workshops	3
7800:230	Development of Theatre: History of Theatre	3
7800:262	Stage Make-up	3
7800:370	The American Theatre: Play, Players, and Playwrights	3

**Interior Design Option**

The professional interior designer is qualified by education, experience, and examination to enhance the the function and quality of interior spaces for the purpose of improving the quality of life, increasing productivity, and protecting the health, safety, and welfare of the public. This four-year professional program prepares students for entry-level positions in residential or nonresidential interior design. The program includes understanding and application of the design process; space planning and programming; furniture selection and layout; application of design elements and decorative elements; selection and application of lighting and color; codes, regulations, and barrier-free environments; systems; development of drafting and communications skills; study of the basic and creative arts; the profession; environmental concerns; universal design; and computer applications in interior design. Both lecture and studio coursework are included in this program. Assistance with entry-level job placement is available. Affiliation with the American Society of Interior Designers (ASID) is available through membership in the student chapter.

**Admission to the Interior Design Option Program:**

Students must meet the College of Fine and Applied Arts Requirements for Admission. Incoming freshmen will be designated as Pre-Interior Design Candidates and will remain in this category until the following requirements have been met:

- Sign a Pre-Interior Design Contract
- Successful completion of the following courses:
 

7100:144	Two-Dimensional Design
7100:491	Architectural Presentations I
7400:158	Introduction to Interior Design
- Completion of application for Interior Design Major
- Completion of the screening process
- Selection and notification by the interior design faculty into the Interior Design Major
- Upon admission into the program, students will sign an Interior Design Contract and must maintain a grade-point average of 2.50 in all courses in the interior design core.
- Transfer students from non-FIDER accredited interior design programs will be placed as pre-interior design candidates.
- Transfer students from FIDER accredited programs will be admitted directly into the program if they have an overall grade-point average of 2.50 and submit an approved portfolio.
- Postbaccalaureate students seeking an additional degree must have an overall grade-point average of 2.50 in all previous college-level work and meet with the Director of Interior Design Studies for an individual evaluation.

Detailed information about this program of study may be obtained by writing directly to the Director of Interior Design Studies, Schrank Hall South 215D, The University of Akron, Akron, OH 44325.

Interior Design majors are required to follow the program of study as published due to prerequisites and course content sequencing requirements. There is no foreign language requirement.

• Core (minimum of 2.00 required):

2940:250	Architectural Drafting	3
7100:144	Two-Dimensional Design	3
7100:491	Architectural Presentations I	3
7100:492	Architectural Presentations II	3
7400:121	Textiles	3
7400:158	Introduction to Interior Design	3
7400:239	Fashion and Furnishings Industry	3
7400:257	Introduction to AUTOCAD for Interior Design	3
7400:258	Light in Man-Made Environments	3
7400:269	Family Housing	3
7400:302	Consumers of Services	3

		Credits
7400:332	Human Factors and Interior Space	3
7400:333	Space Planning and Programming	3
7400:334	Specifications for Interiors I	3
7400:335	Specifications for Interiors II	3
7400:336	Principles and Practices of Design	3
7400:418	History of Interior Design I	4
7400:419	History of Interior Design II	4
7400:425	Advanced Textiles	3
7400:433	Residential Design	3
7400:434	Commercial Design	3
7400:458	Office Design	3
7400:459	Senior Design Synthesis	3
7400:497	Interior Design Internship	3

		Credits
2440:120	Computer and Software Fundamentals	2
2520:211	Mathematics and Retail Distribution	3
2520:212	Principles of Sales	3
2520:106	Visual Promotion	3

- Completion of remaining credits in the School of Home Economics and Family Ecology curriculum.

7400:123	Fundamentals of Clothing Construction	3
7400:133	Nutrition Fundamentals	3
	or	
7400:141	Food for the Family	3
7400:147	Orientation to Professional Studies	1
7400:158	Introduction to Interior Design and Furnishing	3
7400:201	Courtship, Marriage and the Family	3
	or	
7400:265	Child Development	3
7400:302	Consumers of Services	3
7400:362	Family Life Management	3
7400:425	Advanced Textiles	3
7400:437	Historic Costume to 1800	3
7400:438	History of Fashion Since 1780	3
7400:447	Senior Seminar: Critical Issues	1
7400:xxx	Clothing, Textiles, and Interiors Electives	15
	(see Clothing, Textiles and Interiors Business Option)	

## Bachelor of Arts (2+2) with C & T College Marketing and Sales Technology

### General Information

The Fashion Option student will complete 64 hours in the Community and Technical College and 65-66 hours in the College of Fine and Applied Arts. The Retailing Option student will complete 66 hours in the Community and Technical College and 71 hours in the College of Fine and Applied Arts.

In the first two years the student will be advised by faculty in the Community and Technical College. In the last two years, the student will be advised by the Clothing, Textiles, and Interiors faculty in the School of Home Economics and Family Ecology, College of Fine and Applied Arts.

## Bachelor of Arts in Clothing, Textiles and Interiors, Business Option (2+2) with C & T Marketing and Sales Technology, Fashion Option

- Completion of all requirements for the Associate Degree in Marketing and Sales Technology, Fashion Option, as established by the Community and Technical College, with technical electives taken from courses in the School of Home Economics and Family Ecology, College of Fine and Applied Arts.

### C&T Requirements

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:243	Survey of Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
2520:103	Principles of Advertising	3
2520:106	Visual Promotion	3
2520:202	Retailing Fundamentals	3
2520:210	Consumer Service Fundamentals	2
2520:211	Mathematics of Retail Distribution	3
2520:212	Principles of Salesmanship	3
2540:119	Business English	3
5540:xxx	Physical Education	1
7800:105	Introduction to Public Speaking	3

### Fashion Option

2420:202	Personnel Practices	3
7400:121	Textiles	3
7400:219	Clothing Communication	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:239	The Fashion and Furnishings Industries	3

### College of Fine and Applied Arts Requirements

- Completion of remaining General Education requirements
- Completion of remaining credits in the School of Home Economics and Family Ecology curriculum
- Completion of language alternative: 14 hours of specified course work, completed as a part of the requirements for the Associate Degree, will be accepted as language alternatives for the Bachelor's degree.
- The following courses required for the Associate Degree programs will be accepted as language alternative for those students completing both the Associate Degree in Marketing and Sales Technology, Fashion or Retailing Options, and the Bachelors of Arts in Clothing, Textiles, and Interiors, Business Option:

2020:240	Human Relations	3
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## Bachelor of Arts in Clothing, Textiles and Interiors, Business Option (2+2) with C & T Marketing and Sales Technology, Retailing Option

- Completion of all requirements for the Associate Degree in Marketing and Sales Technology, Retailing Option, as established by the Community and Technical College with the addition of two elective hours. Total electives is thus brought to nine which students fulfill by taking three courses selected from a list of suggested Clothing, Textiles, and Interiors courses from the School of Home Economics and Family Ecology.

### C&T College Requirements

7600:105	Introduction to Public Speaking	3
5540:xxx	Physical Education	1
2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:243	Survey in Finance	3
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals	2
	and	
2520:215	Advertising Projects	2
	or	
2520:219	Sales Projects	2
2520:103	Principles of Advertising	3
2520:106	Visual Promotion	3
2520:202	Retailing Fundamentals	3
2520:210	Consumer Service Fundamentals	2
2520:211	Mathematics of Retail Distribution	3
2520:212	Principles of Sales	4
2520:217	Merchandising Projects	2
2540:119	Business English	3
7400:121	Textiles	3
7400:219	Clothing Communication	3
7400:239	The Fashion and Furnishings Industries	3

### College of Fine and Applied Arts Requirements

7400:123	Fundamentals of Construction	3
7400:133	Nutrition Fundamentals	3
	or	
7400:141	Food for the Family	3
7400:147	Orientation to Professional Studies	1
7400:158	Introduction to Interior Design	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:201	Courtship, Marriage and Family Relationships	3
	or	
7400:265	Child Development	3
7400:302	Consumers of Services	3
7400:362	Family Life Management	3
7400:425	Advanced Textiles	3
7400:437	Historic Costume to 1800	3
7400:438	History of Fashion Since 1780	3
7400:447	Senior Seminar: Critical Issues	1
7400:xxx	Clothing, Textiles, and Interiors Electives	15
	(see Clothing, Textiles and Interiors, Business Option)	

**Bachelor of Science in Dietetics**

To become a registered dietitian (RD), a student must complete the academic requirements, complete a 900-hour supervised experience in dietetic practice, obtain appropriate verification, and pass the dietetic registration examination. Only approved or accredited programs like those at The University of Akron are recognized by the American Dietetic Association (ADA).

The University of Akron has three routes to prepare a student for a career in dietetics – the Didactic Program, the Coordinated Program, and a 2+2 Option for students with a two-year degree in Restaurant Management from the Community and Technical College (C & T). The Didactic Program (which is approved by ADA) includes all required coursework necessary to apply for a 900-hour supervised experience in dietetic practice through a dietetic internship (DI) or Approved Preprofessional Practice Program (AP4) outside the university. The Coordinated Program (which is accredited by ADA) allows students to complete their required 900 hours of supervised experience along with regular coursework during their junior and senior years. The 2+2 Option with C & T allows a student to move into the Didactic Program or apply for the Coordinated Program. Regardless of the option chosen, students must have successfully completed their coursework and 900 hours of experience before they are eligible to take the registration examination.

Only 12 students per year are admitted to the Coordinated Program. Applications are accepted no later than February 1 of each year. Students who wish to apply to the Coordinated Program must have completed, or be currently taking, the prerequisite courses indicated below by an asterisk(\*). Some remaining prerequisites may be completed during the summer following application if these courses are offered during a summer session. In addition to completing the required prerequisites, students must have a minimum GPA of 2.50 with a science GPA of 3.0 and have been accepted to the College of Fine and Applied Arts prior to submission of the application. Students must submit three letters of recommendation and successfully complete an interview. Previous work experience or volunteer activity, preferably in the area of food service or nutrition, although not required, is encouraged before applying for the Coordinated Program.

Students selected for the Coordinated Program will continue their classwork and begin their 900 hours of supervised experience the following fall semester. Students not accepted will continue in the Didactic Program or the 2+2 Option with C & T.

**Didactic Program Option**

• Home Economics and Family Ecology Core (14 credits)		
Note: 7400:133 Nutrition Fundamentals**† must be taken.		
• General Education Requirement (42 credits)		
	<i>Credits</i>	
3150:129	4	Introduction to General, Organic, and Biochemistry I**†
3150:130	4	Introduction to General, Organic, and Biochemistry II**†
3250:100	3	Introduction to Economics*
3300:111	4	English Composition I*
3300:112	3	English Composition II*
3400:210	4	Humanities in the Western Tradition I
—:—	3	Humanities elective
—:—	3	Humanities elective
Note: See General Education Program under University College. Humanities electives must be chosen from two different sets.		
3400:385-391	2	World Civilization
3400:385-391	2	World Civilization
3450:xxx	3	Mathematics* (per placement test)
3850:100	4	Introduction to Sociology*
5540:xxx	1	Physical Education
7600:105	3	Introduction to Public Speaking*
		or
7600:106	3	Effective Oral Communication
• American Dietetic Association Requirements (71-73 credits)		
3100:130	3	Principles of Microbiology**†
3100:208	4	Human Anatomy and Physiology I**†
3100:209	4	Human Anatomy and Physiology II**†
3470:260	3	Basic Statistics
		or
3470:261	2	Introductory Statistics I
3750:100	3	Introduction to Psychology**†
5400:351	4	Consumer Homemaking Methods
6200:201	4	Accounting I*
		or
2420:211	3	Basic Accounting I*
6500:341	3	Human Resource Management†

6500:480	Introduction to Health-Care Management†	3
7400:245	Food Theory and Application I**†	3
7400:246	Food Theory and Application II**†	3
7400:301	Consumer Education	3
7400:310	Food Systems Management I†	5
7400:315	Food Systems Management I Clinical†	2
7400:328	Nutrition in Medical Science I†	4
7400:329	Nutrition in Medical Science I Clinical†	3
7400:413	Food Systems Management II†	3
7400:414	Food Systems Management II Clinical†	2
7400:424	Nutrition in the Life Cycle†	3
7400:426	Therapeutic Nutrition†	5
7400:428	Nutrition in Medical Science II†	5
7400:429	Nutrition in Medical Science II Clinical†	3
7400:480	Community Nutrition I†	3
7400:482	Community Nutrition II†	3

- Electives (10 hours)

**Coordinated Program Option**

• Home Economics and Family Ecology Core (14 credits)		
Note: 7400:133 Nutrition Fundamentals**† must be taken.		
• General Education Requirement (42 credits)		
3150:129	4	Introduction to General, Organic, and Biochemistry I**†
3150:130	4	Introduction to General, Organic, and Biochemistry II**†
3250:100	3	Introduction to Economics*
3300:111	4	English Composition I*
3300:112	3	English Composition II*
3400:210	4	Humanities in the Western Tradition I
—:—	3	Humanities elective
—:—	3	Humanities elective
Note: See General Education Program under University College. Humanities electives must be chosen from two different sets.		
3400:385-391	2	World Civilization
3400:385-391	2	World Civilization
3450:xxx	3	Mathematics* (per placement test)
3850:100	4	Introduction to Sociology*
5540:xxx	1	Physical Education
7600:105	3	Introduction to Public Speaking*
		or
7600:106	3	Effective Oral Communication
• American Dietetic Association Requirements (71-73 credits)		
3100:130	3	Principles of Microbiology**†
3100:208	4	Human Anatomy and Physiology I**†
3100:209	4	Human Anatomy and Physiology II**†
3470:260	3	Basic Statistics
		or
3470:261	2	Introductory Statistics I
3750:100	3	Introduction to Psychology**†
5400:351	4	Consumer Homemaking Methods†
6200:201	4	Accounting I*
		or
2420:211	3	Basic Accounting I
6500:341	3	Human Resource Management†
6500:480	3	Introduction to Health-Care Management†
7400:245	3	Food Theory and Application I**†
7400:246	3	Food Theory and Application II**†
7400:310	5	Food Systems Management I†
7400:315	2	Food Systems Management I Clinical†
7400:328	4	Nutrition in Medical Science I†
7400:329	3	Nutrition in Medical Science I Clinical†
7400:413	3	Food Systems Management II†
7400:414	2	Food Systems Management II Clinical†
7400:424	3	Nutrition in the Life Cycle†
7400:426	5	Therapeutic Nutrition†
7400:428	5	Nutrition in Medical Science II†
7400:429	3	Nutrition in Medical Science II Clinical†
7400:480	3	Community Nutrition I†
7400:481	1	Community Nutrition I Clinical†
7400:482	3	Community Nutrition II†
7400:483	1	Community Nutrition II Clinical†
7400:486	1	Staff Relief: Dietetics†
• Electives (5 hours)		

\* Students who wish to apply for the Coordinated Program must have completed, or be currently taking, all of the prerequisite courses indicated by an asterisk (\*)

† In order to earn a Plan V Verification Statement, students graduating from any of the three options leading to a B.S. in Dietetics must obtain a grade of "C" or better in this course.

\* Students who wish to apply for the Coordinated Program must have completed, or be currently taking, all of the prerequisite courses indicated by an asterisk (\*)

† In order to earn a Plan V Verification Statement, students graduating from any of the three options leading to a B.S. in Dietetics must obtain a grade of "C" or better in this course.

**(2+2) Option with C & T (Restaurant Management)**

		Credits
2020:121	English	4
2020:222	Technical Report Writing	3
2040:247	Survey of Basic Economics	3
2280:120	Safety and Sanitation	3
2280:121	Fundamentals of Food Preparation I	4
2280:122	Fundamentals of Food Preparation II	4
2280:123	Meat Technology	2
2280:135	Menu Planning and Purchasing	3
2280:232	Dining Room Service and Training	2
2280:233	Restaurant Operation and Management	4
2280:236	Food and Beverage Cost Control	4
2280:237	Internship	1
2280:238	Cost Control Procedures	3
2280:240	Systems Management and Personnel	3
2280:243	Food Equipment and Plant Operations	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
	or	
2540:263	Business Communications	3
2420:280	Essentials in Law	3
2520:103	Principles of Advertising	3
2540:119	Business English	3
3100:130	Principles of Microbiology <sup>†</sup>	3
3100:208	Human Anatomy and Physiology I <sup>†</sup>	4
3100:209	Human Anatomy and Physiology II <sup>†</sup>	4
3150:129	Introduction to General, Organic & Biochemistry I <sup>†</sup>	4
3150:130	Introduction to General, Organic & Biochemistry II <sup>†</sup>	4
3300:112	English Composition II	3
3400:210	Humanities in the Western Tradition I	4
-----	Humanities elective	3
-----	Humanities elective	3
	Note: See General Education Program under University College. Humanities electives must be chosen from two different sets.	
3400:385-391	World Civilization	2
3450:145	College Algebra	4
3470:260	Basic Statistics	3
	or	
3470:261	Introductory Statistics I	2
3750:100	Introduction to Psychology <sup>†</sup>	3
3850:100	Introduction to Sociology	4
5400:351	Consumer Homemaking Methods <sup>†</sup>	4
5540:xxx	Physical Education	1
6500:480	Introduction to Health Care Management <sup>†</sup>	3
7400:xxx	Clothing Communication, Textiles or Housing option	3
7400:133	Nutrition Fundamentals <sup>†</sup>	3
7400:147	Orientation to Professional Studies in Home Economics and Family Ecology	1
7400:201	Courtship, Marriage, and Family Relationships or	2
7400:265	Child Development	3
7400:301	Consumer Education	3
7400:328	Nutrition in Medical Science I <sup>†</sup>	4
7400:362	Family Life Management	3
7400:413	Food Systems Management II <sup>†</sup>	3
7400:420	Experimental Foods	3
7400:421	Special Problems: Food Theory and Application	3
7400:421	Special Problems: Food Systems Management I	2
7400:424	Nutrition in Life Cycle <sup>†</sup>	3
7400:426	Therapeutic Nutrition <sup>†</sup>	5
7400:428	Nutrition in Medical Science II <sup>†</sup>	5
7400:447	Critical Issues in Home Economics	1
7600:105	Introduction to Public Speaking or	3
7600:106	Effective Oral Communication	3

**Home Economics Teacher Education**

Home economics education majors receive training and preparation to teach in grades 7 through 12. Options are available in vocational work and family life education (consumer homemaking), vocational job training and non-vocational home economics. Vocational job training specializations are available in foods and hospitality, child-care/day-care, fabrics and interiors, health, home and community, and multi-area options. A minor in home economics education is also available. Home economics education students may elect to graduate from the College of Education or the College of Fine and Applied Arts. Contact the School of Home Economics and Family Ecology for copies of these specific programs or to meet with the home economics education adviser. Transcript analysis for these specific vocational options is available upon request.

**Secondary Education Requirements for Home Economics Education**

<b>Teaching Certificates</b>		Credits
5050:210	Characteristics of Learners	3
5050:211	Teaching and Learning Strategies	3
5050:310	Instructional Design	3
5050:311	Instructional Resources	3
5050:320	Diversity in Learners	3
5050:330	Classroom Management	3
5050:410	Professional Issues in Education	3
5300:325	Content Reading in Secondary Schools (30 clinical hours)	3
5300:375	Exploratory Experience in Secondary Education (6 clinical hours, 30 field hours)	1
5300:445	Microcomputer Literacy for Secondary Teachers (30 clinical hours)	2
5300:495	Student Teaching	8-11

**Vocational Work and Family Life Education and Multi-area Job Training Certification: 4-Year Provisional**

## • Vocational Methods Certification Requirements

5200:360	Teaching in the Nursery Center	2
5200:370	Nursery Center Laboratory	2
5400:301	Occupational Employment Experience	4
5400:351	Vocational Work and Family Life Education	4
5400:451	Vocational Home Economics Job Training Methods	3

## • Select one of the following

7100:121	Three-Dimensional Design	3
7100:191	Design	2

## • Required

7400:121	Textiles	3
7400:123	Clothing Construction	3
7400:133	Nutrition Fundamentals	3
7400:147	Orientation to Professional Studies in Home Economics and Family Ecology	1
7400:158	Introduction to Interior Design and Furnishings	3
7400:159	Family Housing	3
7400:201	Courtship, Marriage and Family Relationships	3
7400:245	Food Theory and Application I and	3
7400:246	Food Theory and Application II or	3
7400:141	Food for the Family	3
7400:265	Child Development	3

## • Select one of the following

7400:301	Consumer Education	3
7400:303	Children as Consumers	3

## • Select one of the following

7400:305	Advanced Construction and Tailoring	3
7400:449	Flat Pattern Design	3

## • Select one of the following

2280:121	Fundamentals of Food Preparation	2
7400:340	Meal Service	2

## • Required

7400:362	Family Life Management	3
7400:406	Family Financial Management	3
7400:415	Household Equipment	2
7400:447	Senior Seminar: Critical Issues in Home Economics	1
7400:450	Demonstration Techniques	2
7400:485	Seminar in Home Economics (taken during Student Teaching)	1

**Senior Honors Program**

Senior honors project in home economics and family ecology is one to three credits per semester and may be repeated for a total of six credits. Prerequisite: Senior standing in the Honors Program and approval of honors project by faculty preceptor.

\* Students who wish to apply for the Coordinated Program must have completed, or be currently taking, all of the prerequisite courses indicated by an asterisk (\*)

† In order to earn a Plan V Verification Statement, students graduating from any of the three options leading to a B.S. in Dietetics must obtain a grade of "C" or better in this course.

## 7500: Music

Students wishing to major in music must complete the standard undergraduate application for admission and return it to the Office of Admissions. A student cannot be formally admitted to the School of Music until admitted to the University. To be accepted as a music major, both freshmen and transfer students must successfully complete an audition on their major applied instrument and be evaluated in the knowledge of rudimentary theory, ear training, and keyboard skills. Prospective students should contact the School of Music for information on specialized programs, as well as dates and times for theory evaluations.

### Changing Major Instruments

A student may later change his declared major instrument after being admitted to the School of Music, but must then audition and satisfy all requirements for the new area as an entering student.

### Applied Music Requirements

- Studio Study (Private Lessons) - Skill in at least one major area of performance must be progressively developed to the highest level appropriate to the student's major. All students majoring in music are required to enroll in applied music on their declared major instrument every semester.

A performance major in the Bachelor of Music program must enroll for four credits in applied music each semester which equates to one-hour lesson or two half-hour lessons each week. All other students enroll for two credits in applied music on their declared major instrument each semester which equates to a half-hour lesson each week.

Because of the tutorial nature of applied music study, there is an additional fee for applied music registration beyond the normal credit-hour tuition and general service fee.

The offering of applied music instruction is dependent upon the availability of instructors. Although students may request study with a given instructor, the audition does not guarantee study with a particular member of the faculty. The priority for assignment is as follows: 1) collegiate music majors; 2) music minors; 3) non-music majors who are members of University performing ensembles; 4) pre-college students in the high school/college program of the School of Music; and, 5) all others.

Students will not be eligible for applied music study 1) if they fail to pass the entrance audition; 2) if a particular instructor's studio is full; 3) if the quality of work demonstrated is judged unacceptable by the applied instructor; or 4) if faculty in the student's applied area conclude on the basis of a jury that a continuation of applied study is not merited. Students in the studio are expected to exhibit a mature attitude and productive behavior.

### Levels of Applied Music Study

- The study of applied music is divided into seven course levels. These conform to levels of proficiency and the requirements of the various degree programs.

Entrance to applied music is by audition. Advancement in level is by jury examination only.

7520:000	Level for elective credit in non-music programs, pre-college adults, preparatory program enrollment, and for correcting deficiencies before permission is granted to enroll at the 100 level. Credits in applied music at this level cannot be counted toward any degree requirements in music.
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Music majors may apply a maximum of eight credits from any of the following levels to their degree program. A maximum of 32 credits may be counted toward degree requirements.

7520:100	Freshman level
7520:200	Sophomore level
7520:300	Junior level
7520:400	Senior level

### Minimum Performance Levels Required by Degree Program

- **Bachelor of Music in Performance Major** — Thirty-two credits and completion of the 400 level in the primary performance area. A full senior recital is required.
- **Bachelor of Music in Theory/Composition Major** — Eight credits in a performance area and completion of the 200 level in piano. A full senior composition recital is required.

- **Bachelor of Music in Music Education** — Sixteen credits and completion of the 200 level in the primary performance area. A half recital is required.
- **Bachelor of Music in Jazz Studies** — Sixteen credits and completion of the 200 level in the primary performance area; additional completion of the 100 level in flute and clarinet for saxophone majors and the 200 level in classical guitar for electric guitar majors. A full senior recital is required.
- **Bachelor of Music in History and Literature** — Sixteen credits in the primary performance area and completion of the 200 level in that area. A half senior recital is required.

### Jury System in Applied Music

- A jury examination is the only way in which a student may advance from one course level to another. Each music major may take a jury examination on the declared major instrument in the primary performance area once each year, after two semesters of study, and/or after the minimum number of credits is attained. However, a faculty member of an applied area may require a student to take a jury examination at the end of any semester.

Each applied area is empowered to terminate applied study, to advise a student that further study will not apply to a degree program unless the next jury examination demonstrates capacity to continue. A jury examination may be used by a student studying applied music at the 000 level as an audition to the 100 level.

### Applied Repertory of Study

- Each applied music section (brass, composition, guitar, keyboard, percussion, piano, strings, voice, and woodwinds) has a published repertory of study requirements for each of the course levels. These requirements are available from the Applied Area Coordinator, individual applied instructors, and the School of Music office.

### Studio Classes

- Each music major is required to attend the weekly 50-minute class taught by his applied instructor. Attendance at studio class is part of the requirement for applied music study, and reflects in the student's grade in applied music. Every student is required to perform in studio class at least once each semester.

### Sectional Recitals

- Each applied section holds a sectional recital each week. Attendance by students studying in the section is required. Students who have performed in studio class may sign up to perform on sectional recitals.

### Applied Study for Non-music Majors

- Non-music majors may enroll for applied music with the permission of the individual applied instructor or the area coordinator, whichever is appropriate to the area of study. Acceptance for studio study is based upon an audition, usually given the first week of classes. Only students who meet applied studio standards will be accepted for applied instruction.

### Recital Attendance Requirements

- Bachelor of Music majors are required to enroll for eight semesters of 7500:157(Student Recital). Bachelor of Arts music majors are required to enroll for four semesters. Student Recital (7500:157) carries no academic credit and has no fee. Further information on the attendance requirement is available in the School of Music office.

### Ensemble Requirement

Enrollment in all ensembles requires permission of the instructor.

- **Major Conducted Ensemble Requirement** — Students who are music majors must enroll every semester in a major conducted performance ensemble on their declared major instrument. Auditions for membership are held each year and occasionally each semester. Students must enroll in the major conducted ensemble appropriate to their declared major each semester, on an academic year basis.

Students pursuing a major in History and Literature, Performance, Theory-composition, and Music Education must complete a minimum of eight semesters. However, keyboard majors in Music Education may substitute one year of a major choral ensemble in place of a Keyboard Ensemble. Four semesters are required for Jazz Studies majors, music minors, and those pursuing the Bachelor of Arts degree in music. Students who do not complete degree

requirements within eight semesters must continue to enroll in a major conducted ensemble each semester until graduation requirements are met.

Major conducted Ensembles include: Freshman Chorale, Concert Choir, Guitar Ensemble, Keyboard Ensemble, Concert Band, Symphonic Band, University Symphony Orchestra, and University Singers.

- **Non-major Conducted Ensemble Requirement** — Non-major conducted ensembles may be taken in addition to, but not instead of, major conducted ensembles. Jazz Studies majors are required to complete eight credits in jazz ensembles in addition to four semesters of major conducted ensembles.

Non-major conducted Ensembles include: the Akron Symphony Chorus, Brass Choir, Chamber Orchestra, University Band, Instrumental Ensembles, Jazz Ensemble, Jazz Lab Band, Madrigal Singers, Marching Band, New Music Ensemble, Steel Drum Band, Blue and Gold Brass (Basketball Band), and Wind Choir.

- **Unconducted Ensembles** — Unconducted ensembles may be taken in addition to, but not instead of, major conducted ensembles.

Unconducted ensembles include: Brass Ensembles, Jazz Combos, Mixed Ensembles, Percussion Ensembles, String Ensembles, Vocal Ensembles, and Woodwind Ensembles.

Ensemble credit is repeatable

### Minimum Proficiency Requirements in Keyboard and Voice

- All music majors must meet minimum proficiencies in keyboard, and music education students, in voice.

Keyboard proficiency is met by successfully completing keyboard Harmony I and II and passing a final keyboard examination.

The voice proficiency requirement (for music education students only) is met by successfully completing one semester of Class Voice, or by passing a voice jury.

- Core curriculum in music (for all degree programs)

	Credits	
7500:141	Ear Training/Sight Reading I	1
7500:142	Ear Training/Sight Reading II	1
7500:151	Theory I	3
7500:152	Theory II	3
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:241	Ear Training/Sight Reading III	1
7500:242	Ear Training/Sight Reading IV	1
7500:251	Theory III	3
7500:252	Theory IV	3
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
	Total core credits	30

### Bachelor of Arts

- Total of 131 credits required for degree.
- General Education requirement and 2nd year of a foreign language — 56 credits.

- Core Curriculum in music — 30 credits.

- Performance courses:

7500:157	Student Recital (four semesters)	0
7510:xxx	Music Organization (four semesters in a major conducted ensemble on primary instrument)	4
7520:xxx	Applied Music (Completion of the 200 level on primary instrument)	8

- Electives — 33 credits.

The Bachelor of Arts program is intended as a cultural course or as a preparation for graduate study but not as professional preparation for a performance or teaching career.

### Bachelor of Music

#### Performance (emphasis in accompanying)

- Total of 133 credits required for degree.
- General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.

- Applied music and performance courses: Credits

7510:114	Keyboard Ensemble (eight semesters in a major conducted ensemble)	8
7520:xxx	Applied Piano (completion of 400 level is required prior to graduation)	32
	Applied Voice	2

- In order to complete this program, students are required to have a reading knowledge of French, German, and Italian. This can be accomplished through 7500:265 and 266.

- Additional required music courses — 14-15 credits

7500:325	Research in Music	2
7500:361	Conducting	2
7500:365	Song Literature	2
7500:371	Analytical Techniques	2
7500:451	Introduction to Musicology	2
7500:452	Composition	2
7500:497	Independent Study (Chamber Music)	2
7500:353	Electronic Music	3

(As an alternative to 7500:452 Composition)

- Electives — 4 credits
- Senior recital (to include works as soloist, accompanist and in chamber ensembles).

#### Performance (emphasis in brass)

- Total of 132 credits required for degree.
- General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.
- Applied music and performance courses — 40 credits

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

- Additional required music courses — 14-15 credits

7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	20th Century Analysis	2
7500:452	Composition	2
7500:454	Orchestration	2
7500:471	Counterpoint	2
7500:497	Independent Study (with approval of applied instructor and adviser)	2
7500:353	Electronic Music	3

(As an alternative to 7500:452 Composition, or 7500:454 Orchestration, or 7500:471 Counterpoint)

- Electives 5-6 credits.
- Senior recital (full recital required).

#### Performance (emphasis in piano/harpsichord)

- Total of 132 credits required for degree.
- General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.
- Applied music and performance courses 40 credits.

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

- Additional required music courses — 14 credits.

7500:271	Piano Pedagogy and Literature I	2
7500:272	Piano Pedagogy and Literature II	2
7500:325	Research in Music	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:451	Introduction to Musicology	2
7500:497	Independent Study (with approval of applied instructor and advisor)	2

- Electives — 6 credits.
- Senior recital (full recital required).

#### Performance (emphasis in strings)

- Total of 133 credits required for degree.
- General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.

\* Eight semesters in a major conducted ensemble.

• Applied music and performance courses — 40 credits.

		Credits
7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

• Additional required music courses — 15-16 credits

7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	20th Century Analysis	2
7500:454	Orchestration	2
7500:463	Repertoire and Pedagogy: String Instruments	3
7500:471	Counterpoint	2
7500:497	Independent Study (with approval of applied instructor and advisor)	2
7500:353	Electronic Music (As an alternative to 7500:454 Orchestration)	3

• Electives — 5-6 credits.

• Senior Recital (full recital required)

**Performance (emphasis in voice)**

• Total of 144 credits required for degree.

• General Education requirement — 42 credits.

• Core curriculum in music — 30 credits.

• Applied music and performance courses — 40 credits.

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

• Additional required music courses — 14 credits.

7500:371	Analytical Techniques	2
7500:471	Counterpoint	2
7500:361	Conducting	2
7510:108	Opera Workshop	2
7500:265	Diction I	2
7500:266	Diction II	2
7500:365	Song Literature	2

• Foreign Language Requirement — 12 credits

3550:101	Italian	4
3530:101	German	4
3520:101	French	4

• Senior recital (full recital required).

• Electives 6 credits.

**Performance (emphasis in voice/musical theatre)**

• Total of 142 credits required for degree.

• General Education requirement — 42 credits.

• Core curriculum in music — 18 credits.

7500:101	Intro to Music Theory**	2
7500:104	Class Piano I**	2
7500:105	Class Piano II**	2
7500:151	Theory I	3
7500:152	Theory II	3
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:141,2,3,4	Ear Training/Sight Reading I, II, IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2

• Applied music and performance courses — 44 credits.

7500:157	Student Recital (eight semesters)	0
7510:108	Opera Workshop (six semesters)	6
7510:1xx	Choral Ensembles (by audition)	2
7520:x24	Applied Voice (completion of 300 level)	32
7520:x25	Applied Piano (completion of 200 level)	4

• Additional required music courses — 4 credits.

7500:265	Diction I	2
7500:320	Musical Theatre History and Literature I	2

• Theatre Core — 20 credits

7800:145	Movement for Actors or	3
7920:270	Musical Theatre Dance Techniques	3

\* Eight semesters in a major conducted ensemble

\*\* Not counted in the degree program total; required or excused on entrance audition/placement test.

Credits

7800:151	Voice for the Stage	3
7800:172	Acting I	3
7800:262	Stage Makeup	3
7800:321	Musical Theatre History and Literature II	2
7800:421	Musical Theatre Production	3
7800:475	Acting for Musical Theatre	3

• Dance Core — 10 credits

7900:119	Introduction to Contemporary Dance Techniques I	2
7900:124	Introduction to Ballet I	2
7900:130	Introduction to Jazz Dance I	2
7900:230	Introduction to Jazz Dance II	2
7900:144	Introduction to Tap Techniques I	2

• Senior recital (full recital required – recital may include a maximum of one group of songs from approved operettas and musical theatre works).

• Electives — 4 credits.

**Performance (emphasis in woodwinds)**

• Total of 132 credits required for degree.

• General Education requirement — 42 credits.

• Core curriculum in music — 30 credits.

• Applied music and performance courses — 40 credits.

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

• Additional required music courses — 14-15 credits

7500:325	Research in Music	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:452	Composition	2
7500:454	Orchestration	2
7500:471	Counterpoint	2
7500:497	Independent Study (with approval of applied instructor and advisor)	2
7500:353	Electronic Music (As an alternative to 7500:452 Composition or 7500:454 Orchestration or 7500:471 Counterpoint)	3

• Electives — 5-6 credits.

• Senior recital (full recital required).

**Performance (emphasis in organ)**

• Total of 131 credits required for degree.

• General Education requirement — 42 credits.

• Core curriculum in music (7500:262 not required) — 28 credits.

• Applied music and performance courses — 40 credits.

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

• Additional required music courses 15 credits

7500:263	Service Playing for Organists (in lieu of 7500:262)	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:456	Advanced Conducting: Choral	2
7500:462	Repertoire and Pedagogy: Organ	3
7500:471	Counterpoint	2
7500:497	Independent Study (Choral Arranging)	2

• Electives 6 credits.

• Senior recital (full recital required).

**Performance (emphasis in percussion)**

• Total of 132 credits required for degree.

• General Studies — 42 credits.

• Core curriculum in music — 30 credits.

• Applied music and performance courses — 40 credits.

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

\* Eight semesters in a major conducted ensemble

- Additional required music courses — 14-15 credits
 

7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	20th Century Analysis	2
7500:432	Teaching and Literature: Percussion Instruments	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:471	Counterpoint	2
7500:353	Electronic Music	3

(As an alternative to 7500:471 Counterpoint)
- Electives — 5-6 credits.
- Senior recital (full recital required).

**Performance (emphasis in guitar)**

- Total of 132 credits required for degree.
- General Education requirement 42 credits.
- Core curriculum in music (7500:262 not required) 28 credits.
- Applied music and performance courses 40 credits.
 

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32
- Additional required music courses 16-17 credits.
 

7500:259	Fretboard Harmony (in lieu of 7500:262)	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:467	Guitar Pedagogy	2
7500:469	History and Literature of the Guitar and Lute	2
7500:468	Guitar Arranging	2
7500:471	Counterpoint	2
7500:497	Independent Study (with approval of applied instructor and advisor)	2
7500:353	Electronic Music	3

(As an alternative to 7500:471 Counterpoint)
- Electives 5-6 credits.
- Senior recital (full recital required).

**History and Literature**

- Total of 133 credits required for degree.
- General Education requirement 42 credits.
- Core curriculum in music 30 credits.
- Applied music and performance courses 24 credits.
 

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 200 level is required for graduation)	16
- Additional music courses — 14-15 credits.
 

7500:325	Research in Music	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:451	Introduction to Musicology	2
7500:452	Composition	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:353	Electronic Music	3

(As an alternative to 7500:452 Composition)
- Special study electives in music — 8 credits.
 

Graduate-level courses are available to those undergraduate upperclassmen who qualify for special permission to register.

7500:497	Independent Study in Music	
7500:601	Choral Literature	
7500:621	Music History Survey: Middle Ages and Renaissance	
7500:622	Music History Survey: Baroque Era	
7500:623	Music History Survey: Classical and Romantic Eras	
7500:624	Music History Survey: Twentieth Century	

- Cognate area such as history, language or other arts — 8 credits
- Electives — 6-7 credits
- A reading proficiency equal to the second year of undergraduate study in an approved foreign language (preferably German, French, or Italian) is required for completion of the degree program.

**Theory-Composition**

- Total of 133 credits required for degree.
- General General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.
- Additional music performance courses — 32 credits.
 

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrumental†	8
7520:xxx	Applied Music - composition (completion of the 200 level piano proficiency is required)	16

- Additional music courses — 23 credits.
 

7500:325	Research in Music	2
7500:361	Conducting	2
7500:362	Choral Arranging	2
7500:371	Analytical Techniques	2
7500:372	Techniques for Analysis: 20th Century Music	2
7500:451	Introduction to Musicology	2
7500:452	Composition	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental or	2
7500:456	Advanced Conducting: Choral	2
7500:471	Counterpoint	2
7500:353	Electronic Music	3

- Senior recital of original composition.
- Electives — 6 credits.

**Jazz Studies\*\***

- Total of 135 credits required for degree.
- General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.
- Additional music courses — 6-7 credits.
 

7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:454	Orchestration	2
7500:353	Electronic Music	3

(As an alternative to 7500:454 Orchestration)

- Additional jazz courses — 21 credits.
 

7500:210,1	Jazz Improvisation I, II	4
7500:212	The Music Industry: A Survey of Practices and Opportunities	2
7500:307	Techniques of Stage Band Performance and Direction	2
7500:308	Jazz History and Literature	3
7500:309	Jazz Keyboard Techniques	2
7500:310	Jazz Improvisation III	2
7500:311	Jazz Improvisation IV	2
7500:407	Jazz Arranging and Scoring	2
7500:497	Independent Study (Practicum in Jazz Studies)	2

- Applied music and performance courses — 28 credits.
 

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization	
	Major Conducted Jazz Ensembles	4
	Jazz Ensembles	8
7520:xxx	Applied Music - primary instrument (completion of 200 level is required for graduation)	16

Saxophone major must pass flute and clarinet proficiency (completion of 100 level is required)  
Guitar majors must pass classical guitar proficiency (completion of the 100 level is required)

- Electives — 7-8 credits.
- Senior recital.

† Passage to the 300 level in the primary applied area is required before graduation.

\*\* Acceptance in the jazz program is by permission of the coordinator of Jazz Studies

\* Eight semesters in a major conducted ensemble

**Music Education**

The music education curriculum strives to bring each of its students to an intellectual understanding of the pedagogical, historical, and theoretical aspects of musical performance while demanding the highest levels of technical and artistic development in the teaching and performing of music.

In view of the heavy educational requirements, students may be required to attend eight semesters plus one or two summer terms in order to complete the degree within a four-year period.

- General Education requirement — 42 credits.
- Core curriculum in music — 30 credits.
- Applied music and performance courses — 24 credits.
 

	Credits
7500:157 Student Recital (eight semesters)	0
7510:xxx Music Organization*	8
7520:xxx Applied Music primary instrumental (completion of the 200 level is required prior to graduation)	16
- Additional music courses — 10 credits.
 

7500:254 String Instruments I	2
7500:297 Introduction to Music Education	2
7500:340 Teaching General Music	2
7500:342 Elementary Instrumental Music	2
7500:361 Conducting	2
- Additional music courses by major:
 

Vocal and Keyboard — 15 credits	
7500:265 Diction for Singers	2
7500:341 Curricular Innovations in General Music	3
7500:344 Secondary Choral Music Methods	3
7500:363 Intermediate Choral Conducting	2
7500:456 Advanced Conducting: Choral	2
Approved Electives	3
Instrumental (Band) — 15 credits	
7500:205 Marching Band Organization and Technique	2
7500:275 Double Reeds/Percussion Methods	1
7500:276 Brass Methods	1
7500:277 Woodwind Methods	1
7500:307 Techniques of Stage Band Performance and Direction	2
7500:343 Secondary Instrumental Music	2
7500:345 History and Literature of the Wind Band	2
7500:454 Orchestration	2
7500:455 Advanced Conducting: Instrumental	2
Instrumental (String) — 11 credits	
7500:255 String Instruments Techniques II (second semester)	2
7500:276 Brass Methods	1
7500:277 Woodwind Methods	1
7500:454 Orchestration	2
7500:455 Advanced Conducting: Instrumental	2
Approved Electives	3
- Professional Education (Including Student Teaching and 7500:492 Senior Seminar) — 25 credits.
- One-half recital during 12 months prior to graduation but not during the semester of student teaching except with special permission of Area Coordinator.
- Minimum vocal, keyboard and conducting proficiencies must be attained before assignment to student teaching.
- Instrumental-Band majors must have two semesters of 7510:104 Marching Band as a prerequisite for 7500:205.

**7600: Communication**

**Requirements for transferring into the School of Communication**

Completion of 7600:102, 7600:115, 3300:111 or 2020:121, 3300:112 and 7600:105 or 7600:106 with grade of C or better in each course and completion of the General Education math requirement is required to transfer into the school as a major or to enroll in 300-400 level courses in the School of Communication. Courses satisfying the School of Communication's math requirement include 3450:145 (College Algebra) or 3470:260 (Basic Statistics) or their equivalents. The math requirement is not satisfied by 3450:289 (Math for Fine and Applied Arts).

**Bachelor of Arts**

- General Education requirement and Second Year of a Language — 56 credits
- Communication Core (Grade of C or better required for all core courses.)
 

	Credits
7600:102 Survey of Mass Communication	3
7600:115 Survey of Communication Theory	3
7600:200 Careers in Communication	1
7600:384 Communication Research	3
	10
- Concentration in business and organizational communication, interpersonal and public communication or mass media communication as described in tracks plus departmental electives: 36
- University electives: 26
- Total: 128

**Bachelor of Arts in Business and Organizational Communication**

**Bachelor of Arts in Interpersonal and Public Communication**

**Bachelor of Arts in Mass-Media Communication**

- General Education requirement and "tag" degree course work 56
- Communication Core 10
- Area of specialization as described below plus School of Communication electives 36
- University electives 26
- Total 128

**Exit requirement**

To graduate with a degree from the School of Communication, a student must attain an overall minimum 2.30 GPA for all courses taken in the School of Communication.

**Business and Organizational Communication**

- Communication Core 10
- Major: Choice of Organizational Communication or Public Relations track as follows:

**Public Relations Track:**

Major area: (required)	
7600:201	Newswriting 3
7600:280	Media Production Techniques 3
7600:303	Public Relations Writing 3
7600:309	Public Relations Publications 3
7600:403	Public Relations Strategies 3
7600:404	Public Relations Cases 3
Choose nine credits from the following list:	
7600:235	Interpersonal Communication 3
7600:252	Persuasion 3
7600:345	Business & Professional Speaking 3
7600:405	Media Copywriting 3
Communication electives: (not used for above requirements) 9	
Communication Total 46	

**Organizational Communication Track:**

Major area: (required)	
7600:226	Interviewing 3
7600:235	Interpersonal Communication 3
7600:344	Group Decision Making 3
7600:345	Business & Professional Speaking 3
7600:435	Communication in Organizations 3

\* Eight semesters in a major conducted ensemble

Choose 12 credits from one of the following list:	Credits
7600:201 Newswriting	3
7600:245 Argumentation	3
7600:252 Persuasion	3
7600:303 Public Relations Writing	3
7600:309 Public Relations Publications	3
7600:325 Intercultural Communication	3
7600:436 Analyzing Organizational Communication	3
7600:437 Training Methods in Communication	3
7600:454 Theory of Group Processes	3
Communication Electives: (not used for above requirements)	9
Communication Total	46

**Interpersonal and Public Communication**

Required courses	9
7600:235 Interpersonal Communication	3
7600:245 Argumentation	3
7600:346 Advanced Public Speaking	3
Select a total of nine credits from the following list:	
7600:225 Module: Listening	1
7600:226 Interviewing	3
7600:227 Nonverbal Communication	3
7600:252 Persuasion	3
7600:325 Intercultural Communication	3
7600:344 Group Decision Making	3
7600:355 Freedom of Speech	3
And a total of six credits from the following list:	
7600:454 Theory of Group Processes	3
7600:457 Public Speaking in America	3
7600:470 Analysis of Public Discourse	3
7600:471 Theories of Rhetoric	3
Communication Electives: (not used for above requirements)	12
Communication Total	46

**Mass Media—Communication**

- Core requirements
- Major: Choice of Broadcasting, Corporate Video, or News Track as follows:

**Broadcasting Track:**

Required courses	24
7600:280 Media Production Techniques	3
7600:388 History and Structure of Broadcasting	3
Select a total of 18 credits from these two blocks: (Maximum of 15 credits from each section)	
7600:282 Radio Production	3
7600:283 Television Production	3
7600:288 Film Production	3
7600:361 Audio Recording Techniques	3
7600:383 Advanced Television Production	3
7600:387 Radio Television Writing	3
7600:201 Newswriting	3
7600:395 Radio Station Programming and Operations	3
7600:396 Television Station Programming and Operations	3
7600:484 Regulation of Media	3
7600:486 Broadcast Sales/Management	3
Communication Electives: (not used for above requirements)	12
Communication Total	46

**Corporate Video Track:**

Required courses	26-30
7600:201 Newswriting	3
7600:280 Media Production Techniques	3
7600:361 Audio Recording Techniques	3
7600:362 Video Camera and Recording	3
7600:463 Corporate Video Design	3
7600:464 Corporate Video Management	3
7600:283 TV Production**	3
7600:466 Audio and Video Editing**	3
7600:467 Directing Video Productions**	3
7600:492 Corporate Video Practicum	2-6
Communication Electives: (not used for above requirements)	12
Communication Total	46

**News Track:**

Required News courses	12
7600:201 Newswriting	3
7600:206 Feature Writing	3
7600:301 Advanced Newswriting	3
7600:484 Regulations in Mass Media	3

\*\* May select two of three courses.

And choose one course (3 credits):	Credits
7600:302 Broadcast News Writing	3
7600:306 Magazine Writing	3
And choose two courses (6 credits):	
7600:304 Editing	3
7600:282 Radio Production	3
7600:283 TV Production	3
7600:307 Commercial Electronic Publishing	3
And choose one course (3 credits):	
7600:410 Journalism Management	3
7600:486 Broadcast Sales and Management	3
And:	
Communication Electives: (not used for above requirements)	12
Communication Total	46

**Bachelor of Arts (2+2) with C&T College  
(Computer Programming Technology)**

**Communication Major**

• Communication Core	10
• Area of specialization: Business and Organizational Communication and Communication electives	36
• Tag in Computer Programming	14
• Total	60
• General Education requirement	42
• Other Required Courses for the Associate Degree	33
• University Electives	0
• Total Credits for Bachelor's Degree	135
----- Natural Science	8
----- Area Studies/Cultural Diversity requirement	4
7600:105 Introduction to Public Speaking	3
or	
7600:106 Effective Oral Communication	3
5540:110 Physical Education	1
3300:112 English Composition II	3
3400:210 Humanities in the Western Tradition I	4
----- Humanities requirement	6
(see adviser for options)	
2020:121 English	4
2020:222 Technical Report Writing	3
2030:141,2 Math for Data Processing I, II	7
2040:240 Human Relations	3
2040:247 Survey of Basic Economics	3
2420:211,2 Basic Accounting I, II	6
2440:xxx Computer Programming Electives	6
2420:104 Introduction to Business	3
2440:120 Computer and Software Fundamentals	2
2440:121 Introduction to Programming Logic	2
2440:131 Introduction to Programming	2
2440:132 Assembler Programming	3
2440:133 Structured Cobol Programming	2
2440:234 Advanced Cobol Programming	3
2440:239 RPG II	2
2440:241 Systems Analysis and Design	3
2440:251 Computer Applications Projects	5
2440:254 Job Control Language	1
7600:xxx Communication Electives	9
7600:102 Survey of Mass Communication	3
7600:115 Survey of Communication Theory	3
7600:201 Newswriting	3
7600:235 Interpersonal Communication	3
7600:245 Argumentation	3
7600:280 Media Production Techniques	3
7600:309 Public Relations Publications	3
7600:344 Group Decision Making	3
7600:345 Business and Professional Speaking	3
7600:384 Communication Research	3
7600:403 Public Relations Strategies	3
7600:282 Radio Production	3
or	
7600:361 Audio Recording Techniques	3
7600:283 Television Production	3
7600:288 Film Production	3
7600:387 Radio and TV Writing	3
or	
7600:463 Corporate Video Design	3
7600:435 Communication in Organizations	3

7600:388	History and Structure of Broadcasting	
	or	
7600:464	Corporate Video Management	3
	Additional production course	3
	Communication electives	12

## 7700: Communicative Disorders

### Bachelor of Arts (Clinical or Non-Clinical Option)\* Bachelor of Arts in Communicative Disorders (Clinical or Non-Clinical Option)\*

#### Program Description

The School of Communicative Disorders offers an undergraduate (pre-professional) and graduate program of academic and clinical training in speech-language pathology and audiology. Audiologists are responsible for the non-medical management of hearing loss including testing hearing, selecting and working with hearing aids, counselling individuals concerning hearing loss, providing auditory rehabilitation and making noise measurements. A speech-language pathologist works with children and adults who have problems with communication. A clinician first determines the presence of a problem, then designs a plan for treatment. The speech-language pathologist's therapeutic goal is to help individuals communicate more effectively.

Course work focuses on the evaluation and treatment of the many disordered communication processes. After completing the appropriate prerequisite course work, students with a grade-point average of 3.0 in major field course work and a grade of "B" or better in the prerequisite course may elect to choose the clinic option. Students wishing to study this field without clinical experience at the undergraduate level may pursue a non-clinical curricular option. Decisions regarding degree options and graduate study should be made only after consultation with departmental advisers. A master's degree is required for employment as a speech-language pathologist or audiologist.

Typical work settings for M.A.-level speech-language pathologists and audiologists include: schools, hospitals, clinics, private practice, physicians' offices, hearing aid dealerships, and universities. For employment in school settings, individuals must be certified by the department of education of the state in which they will be working. Since more than 65 percent of practicing speech-language pathologists work in public school settings, it is recommended that undergraduate students who are interested in pursuing careers in the communicative disorders professions, complete the requirements for educational certification, except for student teaching, which can be taken only at the graduate level. These educational requirements can be taken as electives. Each student should consult with an adviser about this option.

#### Program Requirements:

- Completion of the General Education requirement and the second year of a foreign language for the B.A., or the non-foreign language option for the tag degree (B.A. in Communicative Disorders) 57 credits. Students may count 14 credits of American Sign Language for the foreign language requirement.

- Electives — 19 credits

- Core in Communicative Disorders:

7700:101	Beginning Sign Language I	3
7700:110	Introduction to Disorders of Communication	3
7700:111	Introduction to Phonology	2
7700:130	Bases and Structure of Languages	3
7700:140	Introduction to Hearing Science	3
7700:210	Applied Phonology	3
7700:211	Introduction to Speech Science	2
7700:230	Speech and Language Development	3
7700:240	Aural Rehabilitation	4
7700:241	Principles of Audiometry	3
7700:250	Observation and Clinical Methods	2
7700:321	Communicative Disorders I	4
7700:322	Communicative Disorders II	4
7700:330	Language Disorders	4
7700:340	Audiologic Evaluation	2
7700:450	Assessment of Communicative Disorders	3

#### Clinical Option

- Add the following Clinical Practica to the above requirements. Each practicum

is taken two times; however, only four practicum credits may be applied towards the B.A.

		Credits
7700:350	Clinical Practicum: Articulation/Phonology	1
7700:351	Clinical Practicum: Language	1
7700:352	Clinical Practicum: Aural Rehabilitation	1
7700:451	Clinical Practicum: Diagnostic Audiology	1

#### Non-Clinical Option

- To the University electives and core curriculum, add the following for a total of at least 4 credits:

7700:480	Seminar in Communicative Disorders	2
7700:481	Special Projects: Communicative Disorders	2-4

## 7750: Social Work

### Program Description

The social work major is an accredited undergraduate professional program preparing students for entry level practice positions in social service agencies employing Social Workers. Social Work is concerned with the restoration of human social and emotional functioning, with the provision of services to meet social needs and with the prevention of social dysfunctions. Most Social Workers function in agencies responding to specific social problems.

Elective courses are available in such areas as health, community development, child welfare, mental health or retardation, family service, corrections, etc. Certificate programs in Afro-American Studies and Gerontology (Aging) can be scheduled within the elective framework of the curriculum.

Programs can be designed for the student wishing to prepare specifically for generalist practice in the above-mentioned areas. Students will also be prepared for entry into graduate schools of social work for completion of the Master of Social Work degree.

The Bachelor of Arts degree with a major in social work requires completion of two years of a foreign language (Spanish is recommended). The Bachelor of Arts in Social Work degree does not require a language.

Curricula have been developed (2+2 arrangements) so that students completing the two-year associate degree programs in Community Services Technology (C & T), Social Services Technology (Wayne College), and Human Services Technology (Stark Tech) with social services emphasis programs can complete either the B.A. or B.A./S.W. four-year curriculum in social work with two additional years of course work.

There are 2+2 arrangements between this program and both the Associate in Community Services Technology and the Associate of Criminal Justice Technology programs offered in the Community and Technical College, as well as the Associate in Social Services Technology program at the Wayne General and Technical College.

The program can be completed by taking courses in the evening, except for the "field work" experience.

The Social Work Program at The University of Akron is fully accredited by the Council on Social Work Education.

Certificate programs can be designed in Afro-American Studies, Life-Span Development: Adulthood and Aging, Gender Identity and Roles.

Students wishing to major in social work must file an application with the College of Fine and Applied Arts. In addition, a separate application packet must be filed with the School of Social Work. A 2.3 grade point average is required for admission to the School. Once admitted, the student should maintain a 2.5 grade point average in social work major courses.

### Bachelor of Arts

- Completion of the General Education requirement, 42 credits including,

3100:103	Natural Science Biology	4
3850:100	Introduction to Sociology	4

- Course Prerequisites for the Social Work major:

7750:270	Poverty in the United States	3
7750:276	Introduction to Social Welfare	4
7750:427	Human Behavior and Social Environment for Social Workers I	3

- Social Work major:

7750:401,2,3,4	Social Work Practice I, II, III, IV	12
7750:410	Minority Issues in Social Work Practice	3
7750:421	Introduction to the Field Experience	1
7750:422	Field Experience Seminar	1
7750:425	Social Work Ethics	3

\* Courses in the Department of Biology are required to fulfill the natural sciences requirement (3100:264,265). A.B.A. in Communicative Disorders substitutes a core of courses in psychology and related disciplines for the foreign languages (see adviser for specific courses).

		Credits
7750:430	Human Behavior and Social Environment for Social Workers II	3
7750:440	Social Work Research I Note: students are strongly encouraged to complete their math requirement before enrolling in 7750:440 Social Work Research I.	3
7750:441	Social Work Research II	3
7750:445	Social Policy Analysis for Social Workers	3
7750:495	Field Experience: Social Agency (two semesters, four credits each)	8
7750:4xx	Electives in Social Work	6

- General Electives, including 14 credits in a foreign language.

A total of 19 credits in approved courses in the social and behavioral sciences must be taken in addition to the 10 credits that are required (3250:100, Introduction to Economics; 3700:100, Government and Politics in the United States; 3750:100, Introduction to Psychology). The 19 credits may be chosen from the following suggested disciplines: Anthropology, Economics, History, Political Science, Psychology, and Sociology. Associate degree, Minor, and certificate requirements may satisfy some of the general electives.

The General Education requirement, course prerequisites for the social work major, foreign language, and general electives requirements for the Bachelor of Arts degree in social work are the same requirements that students in the following 2+2 programs must complete:

**Bachelor of Arts (2+2) with C&T  
[Community Services Technology (Social Service Emphasis)]**

**Bachelor of Arts (2+2) with C&T  
(Criminal Justice Technology)**

**Bachelor of Arts (2+2) with Wayne College  
[Social Services Technology (Social Service Emphasis)]**

**Bachelor of Arts (2+2) with Stark Tech  
[Human and Social Services]**

## Bachelor of Arts/Social Work

- Completion of the General Education requirement, 42 credits including.

3100:103	Natural Science Biology/Lab and	4
3850:100	Introduction to Sociology	4
• Course Prerequisites for the Social Work major:		
7750:270	Poverty in the United States	3
7750:276	Introduction to Social Welfare	4
7750:427	Human Behavior and Social Environment for Social Workers I	3

- Social Work major:

7750:401,2,3,4	Social Work Practice I, II, III, IV	12
7750:410	Minority Issues in Social Work Practice	3
7750:421	Introduction to the Field Experience	1
7750:422	Field Experience Seminar	1
7750:425	Social Work Ethics	3
7750:430	Human Behavior and Social Environment for Social Workers II	3
7750:440	Social Work Research I Note: students are strongly encouraged to complete their math requirement before enrolling in 7750:440 Social Work Research I.	3
7750:441	Social Work Research II	3
7750:445	Social Policy Analysis for Social Workers	3
7750:495	Field Experience: Social Agency (two semesters, four credits each)	8

- General Electives:

A total of 19 credits in approved courses in the social and behavioral sciences must be taken in addition to the 10 credits that are required (3250:100, Introduction to Economics; 3700:100, Government and Politics in the United States; 3750:100, Introduction to Psychology). The 19 credits may be chosen from the following suggested disciplines: Anthropology, Economics, History, Political Science, Psychology, and Sociology. Associate degree, Minor, and certificate requirements may satisfy some of the general electives.

The General Education requirement, course prerequisites for the social work major, foreign language, and general electives requirements for the Bachelor of Arts in Social Work degree are the same requirements that students in the following 2+2 programs must complete:

**Bachelor of Arts/Social Work (2+2) with C&T  
[Community Services Technology (Social Service Emphasis)]**

**Bachelor of Arts/Social Work (2+2) with C&T  
(Criminal Justice Technology)**

**Bachelor of Arts/Social Work (2+2) with Wayne College  
[Social Services Technology (Social Service Emphasis)]**

**Bachelor of Arts/Social Work (2+2) with Stark Tech  
[Human and Social Services]**

## 7800: Theatre

### Bachelor of Arts

- General Education Requirement, including the second year of a foreign language — 56 credits.

- Core curriculum:

		Credits
7800:100	Experiencing Theatre	3
7800:106	Introduction to Scenic Design	3
7800:107	Introduction to Stage Costume Techniques	3
7800:145	Movement for Actors I	3
7800:151	Voice for the Stage	3
7800:172	Acting I	3
7800:230	Development of Theatre: History of Theatre	3
7800:262	Stage Make-up	3
7800:265	Basic Stagecraft I	3
7800:271	Directing I	3
7800:330	Development of Theatre: Dramatic Literature I	3
7800:430	Development of Theatre: Dramatic Literature II	3
7810:100-400	Production Design/Technical Laboratory	4

- Theatre Electives 23 credits (Consult academic adviser).

- General Electives 9 credits (Consult academic adviser).

- All candidates for the B.A. will be required to earn at least eight credits of 7810 laboratory work. At least four of these credits must be in 7810 Production Laboratory. Majors must enroll in at least one credit of production laboratory every semester they are in residence. To earn laboratory credit, theatre majors must attend all University mainstage auditions. A maximum of sixteen 7810 credits may count toward requirement for the B.A.

### Bachelor of Arts in Theatre Arts

#### (1) Theatre Arts

The concentration is designed to prepare the student for competency – in all areas of theatre – acting/directing, theatre history/criticism and design/technical theatre in order that the student can acquire the skills to teach theatre, to undertake graduate work in theatre or to undertake professional work in commercial or regional theatre. Consult an adviser.

- General Education Requirement — 42 credits.

- Tag Area of Study — 14 credits.

- Theatre — 63 credits.

Required Theatre Arts Core Courses — 40 credits.

- Theatre Electives — 23 credits.

- General Electives — 9 credits.

- Minimum Semester Hours Required — 128

#### (2) Acting

- General Education requirement — 42 credits.

- Theatre — 73 credits.

- Required Theatre Arts core 40 credits.  
(See Bachelor of Arts listing).

- Required Performance/Movement/Voice Classes 19 credits.

7800:245	Movement for Actors II	3
7800:350	Advanced Voice for Stage	3
7800:373	Acting II	3
7800:374	Acting III	3
7800:474	Acting IV	3
7810:110-410	Performance Laboratory	4

- Music Courses — 8 credits.

7520:024	Voice (repeat for 8 credits)	2
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- Dance courses — 6 credits.

7900:119	Introduction to Modern Dance I	2
7900:120	Introduction to Modern Dance II or	2
7900:130	Introduction to Jazz Dance I	2
7900:124	Introduction to Ballet I	2

- Electives (with approval of adviser) 13 credits.

#### (3) Design/Technology

- General Education requirement — 42 credits.

- Required Theatre Arts core — 40 credits.

• Basic preparation — 12 credits.		Credits
7800:225	Stage Lighting	3
7800:263	Scene Painting	3
7800:337	Stage Costume History and Design I	3
7800:365	Stage Design	3
• Intermediate Studio courses 12 credits.		
7800:215	Production and Stage Management	3
7800:338	Stage Costume History and Design II	3
7800:355	Stage Lighting Design	3
7800:436	Styles of Scenic Design	3
• Advanced Studio courses 7-9 credits.		
7800:266	Basic Stagecraft II	3
7800:307	Advanced Costume Techniques	3
7800:470	Practicum in Design/Technology	1-3
• Production laboratory course:		
7810:100-400	Production Design/Technology	4
• Electives (with approval of adviser) — 9-11 credits.		
(Recommended electives are: 7100:121; 7100:131; 7100:132; 7100:144; 7100:185; 7100:190; 7100:191)		

**(4) Musical Theatre**

• General Education requirement — 42 credits.		
• Theatre Core Courses — 26 credits		
7800:145	Movement for Actors	3
7800:151	Voice for the Stage	3
7800:172	Acting I	3
7800:262	Stage Makeup	3
7800:421	Musical Theatre Production	3
7800:475	Acting for Musical Theatre	3
7810:110	Performance Lab	4
7810:100	Production Lab	2
7800:321	Musical Theatre History & Literature II	2
• Theatre Option — 21 credits		
7800:100	Experiencing Theatre	3
7800:230	Development of Theatre: History of Theatre	3
7800:245	Movement for Actors II	3
7800:265	Basic Stagecraft I	3
7800:271	Directing I	3
7800:373	Acting II	3
7800:430	Dramatic Lit II	3
• Dance Core Courses — 13 credits		
7900:119	Intro to Modern Dance I	2
7900:124	Intro to Ballet I	2
7900:144	Intro to Tap Tech I	2
7900:130	Intro Jazz Dance I	2
7900:230	Intro Jazz Dance II	2
7920:270	Musical Theatre Dance Technique	3
• Music Core Courses — 17 credits		
7520:024	Class/Applied Voice (4 semesters) (must include 1 semester of Applied Voice)	8
7520:025	Class/Applied Piano (2 semesters)	4
7500:101	Intro to Music Theory	2
7510:108	Opera Workshop	1
7500:320	Musical Theatre History & Literature I	2
• Electives from Theatre, Music & Dance — 11 credits		

**7900: Dance**

**Bachelor of Fine Arts**

The B.F.A. dance major is designed for the student who wishes to pursue professional training in dance through an emphasis on ballet technique. The Dance program offers training in technical, performing and choreographic skills, as well as an in-depth knowledge of dance history.

Admission to the program is *by audition only*:

Every student must pass a sophomore jury in ballet and modern technique at the completion of two years of study to be admitted to upper-division standing in the dance area. Students must complete one full year of Ballet VIII: Advanced Technique and Performance Styles, and must be enrolled in ballet technique class each semester.\*

• General Education requirement — 42 credits.

• Required dance courses:		Credits
7900:115	Dance as an Art Form (Bypass competency exam available)	2
7920:116,7	Physical Analysis for Dance I, II	4
7920:122, 222	Ballet V: Intermediate Principles/ Ballet VI: Advanced Intermediate Technique*	20
7920:228	Modern V: Intermediate Modern Dance A	3
7920:229	Modern VI: Intermediate Modern Dance B	3
7920:316,7	Choreography I, II	4
7920:320	Dance Notation	2
7920:322, 422	Ballet VII: Principles of Advanced Technique/ Ballet VIII: Advanced Technique and Performance Styles*	20
7920:328	Modern VII: Advanced Modern Dance A	3
7920:329	Modern VIII: Advanced Modern Dance B	3
7920:361	Learning Theory for Dance	2
7920:362	Instructional Strategies for Dance	2
7920:416	Choreography III	2
7920:417	Choreography IV	2
7920:431	Dance History: Prehistory to 1661	2
7920:432	Dance History: 1661 through Diaghilev Era	2
7920:433	Dance History: 20th Century	2

• Electives (with approval of adviser) 8 credits.

• All candidates for the B.F.A. will be required to earn at least five credits of 7910: Dance Organizations.

7910:101	Classical Ballet Ensemble	1
7910:102	Character Ballet Ensemble	1
7910:103	Contemporary Dance Ensemble	1
7910:104	Jazz Dance Ensemble	1
7910:105	Musical Comedy Ensemble	1
7910:106	Opera Dance Ensemble	1
7910:107	Experimental Dance Ensemble	1
7910:108	Choreographers' Workshop	1
7910:109	Ethnic Dance Ensemble	1
7910:110	Period Dance Ensemble	1
7910:111	Touring Ensemble	1
7910:112	Dance Production Ensemble	1
	Total Dance Curriculum	81-83

**Bachelor of Arts**

The B.A. dance major is designed for the student who wishes to pursue dance training through an emphasis on the four major dance idioms of ballet, modern, jazz and tap dance. The program offers adjunctive course work in choreography, history, physical analysis and pedagogy.

Admission to the degree is *by audition only*.

Every student must pass a sophomore jury in ballet, modern, tap, and jazz technique at the completion of two years of study to be admitted to upper-division standing in the dance area. All students are required to study dance technique every semester they are enrolled, and must be promoted into Ballet Technique VII: Principles of Advanced Technique, for graduation.

• General Education requirement and foreign language\*\* — 56 credits.

• Required dance courses:		
7900:115	Dance as an Art Form	2
7920:116, 7	Physical Analysis for Dance I, II	4
7920:122, 222	Ballet V: Intermediate Principles Ballet VI: Advanced Intermediate Technique	20
7920:228	Modern V: Intermediate Modern Dance A	3
7920:316, 7	Choreography I, II	4

\* Students are required to complete 40 credits of ballet technique for graduation regardless of level originally placed in at time of admission.

\*\* Sign language may be taken in place of a foreign language.

Credits

7920:320	Dance Notation	2
7920:361	Learning Theory for Dance	2
7920:362	Instructional Strategies for Dance	2

- Choose one of the following:

7920:431	Dance History: Prehistory to 1661	2
7920:432	Dance History: 1661 through Diaghilev Era	2
7920:433	Dance History: 20th Century	2

- Choose a minimum of one from each category as dance electives for a minimum of nine credits

**Category A**

7920:229	Modern VI: Intermediate Modern Dance B	3
7920:328	Modern VII: Advanced Modern Dance A	3
7920:329	Modern VIII: Advanced Modern Dance B	3

**Category B**

7900:351	Jazz Dance Styles	2
7900:451	Advanced Jazz Dance Styles	2

**Category C**

7920:145	Beginning Tap Styles	2
7920:246	Intermediate Tap Styles	2

- Choose one category D, E, or F for a total of four credits:

**Category D**

7920:416	Choreography III	2
7920:417	Choreography IV	2

**Category E\***

7920:431	Dance History: Prehistory to 1661	2
7920:432	Dance History: 1661 - Diaghilev Era	2
7920:433	Dance History: 20th Century	2

- All candidates for the B.A. will be required to earn at least four credits of 7910: Dance Organizations.

7910:101	Classical Ballet Ensemble	1
7910:102	Character Ballet Ensemble	1
7910:103	Contemporary Dance Ensemble	1
7910:104	Jazz Dance Ensemble	1
7910:105	Musical Comedy Ensemble	1
7910:106	Opera Dance Ensemble	1
7910:107	Experimental Dance Ensemble	1
7910:108	Choreographers' Workshop	1
7910:109	Ethnic Dance Ensemble	1
7910:110	Period Dance Ensemble	1
7910:111	Touring Ensemble	1
7910:112	Dance Production Ensemble	1
	Total Dance Curriculum	58
	General Electives	17

**Musical Theatre Degree—B.F.A. in Dance**

The Musical Theatre Degree is designed to meet the expanding needs in the entertainment field. The student receives strong dance technical training supported with the skills of singing and acting.

Admission to the degree is *by audition only*.

- General Education requirement — 42 credits

- Dance Courses:

Credits

7900:115	Dance as an Art Form	2
7900:130	Introduction to Jazz Dance I	2
7900:144	Introduction to Tap Technique I	2
7900:219	Modern III: Intermediate Beginner A	2
7900:220	Modern IV: Intermediate Beginner B	2
7900:230	Introduction to Jazz Dance II	2
7910:101-112	Dance Ensembles (including Dance Production)	5
7920:116	Physical Analysis for Dance I	2
7920:117	Physical Analysis for Dance II	2
7920:122	Ballet V: Intermediate Principles (2x)	10
7920:145	Beginning Tap Styles	2
7920:228	Modern V: Intermediate Modern Dance A	3
7920:246	Intermediate Tap Styles	2
7920:270	Musical Theatre Dance Techniques	3
7920:316	Choreography I	2
7920:317	Choreography II	2
7920:347	Advanced Tap Styles	2
7920:351	Jazz Dance Styles	2
7920:361	Learning Theory for Dance	2
7920:416	Choreography III	2
7920:417	Choreography IV	2
7920:430	History of Musical Theatre in Dance	2
7920:433	Dance History: 20th Century Dance	2
7920:451	Advanced Jazz Dance Styles	2
	Total Dance Curriculum	61

- Music Courses:

7500:101	Introduction to Music Theory	2
7500:107	Class Voice I	2
7520:124	Applied Voice	2

Two semesters of voice are required, including one semester of applied voice. If a student has sufficient ability and the requisite music reading skills, he/she may study all three semesters at the applied level.

7500:104	Class Piano I and	2
7500:105	Class Piano II or	2
7520:025	Applied Piano (Two semesters of piano study are required for a total of 4 credits)	4
	Total Music Curriculum	12

- Theatre Courses:

7800:151	Voice for the Stage	3
7800:172	Acting I	3
7800:262	Stage Makeup	3
7800:475	Acting for Musical Theatre	3
	Total Theatre Curriculum	12

- Preferred Elective:

7510:xxx	Choral Ensemble	
7510:100	Production Lab 1 credit/semester	
7510:110	Performance Lab 1 credit/semester	
7800:145	Movement for Actors	3
7800:121	Musical Theatre Production	3
7810:100	Production Lab	2
7810:110	Performance Lab	4
	General Electives (with approval of adviser)	3

\* Dance History course taken for requirement does not fulfill this elective.

# College of Nursing

V. Ruth Gray, Ed.D., R.N., *Dean*  
 Dolores A. Bower, Ph.D., R.N., *Associate Dean, Graduate Program*  
 Elaine F. Nichols, Ed.D., R.N., *Associate Dean, Undergraduate Program*  
 Phyllis A. Fitzgerald, Ph.D., R.N., *Assistant Dean of Student Affairs*  
 Elizabeth Kinion, Ed.D., R.N., *Director of the Center for Nursing*

## ACCREDITATION

The Baccalaureate nursing program is approved by the Ohio Board of Nursing. The Baccalaureate and Masters programs are fully accredited by the National League for Nursing, Council of Baccalaureate and Higher Degree Programs.

## PHILOSOPHY

The College of Nursing, an integral part of The University of Akron, accepts the responsibility for promoting the general mission of the University, which is the dissemination and pursuit of knowledge, the nurturing of intellectual curiosity, the search for truth and a conscious effort to serve the (nursing) student in the urban and rural community.

The College of Nursing faculty believe that the foci of professional nursing are individuals, families and communities.

**The individual** is seen as a complex whole whose existence involves patterns, dynamic change, transformation and interdependence. The individual interrelates within the environment in biological, psychological, social, spiritual, cultural and other dimensions. The individual is unique and universal. The individual is a thinking, feeling, interacting, evolving, creating, valuing being.

**Families** are individuals dynamically connected with each other over time. Family configurations may be traditional or nontraditional.

**Communities** are groups of people with one or more common characteristics who are in relationship to one another and may or may not interact.

**Health** is comparative, dynamic, multidimensional and has personal meaning. It includes disease, nondisease, and quality of life. People have the right to participate in decisions affecting and effecting personal health.

**Environment** includes all living and nonliving dimensions with which the individual, family and community have interrelationships. The dynamic environmental interrelations define and establish rules for health and modes of action.

**Nursing** is an art and a science. The discipline of nursing is concerned with individual, family and community and their responses to health within the context of the environment. Professional nursing includes the appraisal and the enhancement of health. Personal meanings of health are understood in the nursing situation within the context of familial, societal and cultural meanings. The professional nurse uses knowledge from theories and research in nursing and other disciplines in providing nursing care. The practice of nursing occurs in a variety of settings. The role of the nurse involves the exercise of social and cultural responsibilities, including accountability for professional actions and provision of quality nursing care.

**Education** is an individualized, lifelong process. Learning is a continual process and includes the individual's interrelations with the environment. Knowledge acquisition, development of critical thinking and self-expression enable the student to respond to clients who have unique human values and cultural heritage. Each nursing student brings attitudes, beliefs, values, feelings, knowledge and experience into the learning environment. These variables influence learning. Learning occurs through continual construction and reconstruction of experiences in relation to environmental influences.

Nursing education at the baccalaureate level synthesizes knowledge from nursing, humanities, and social, cultural, physical and natural sciences to operationalize the nursing process in practice. The student is prepared to function as a nurse

generalist in a variety of settings. Faculty and students continually seek to refine the commitment to and understand the relationship between theory and practice. Students are encouraged to become self-directed, collaborative, interdependent and independent. These variables are the foundation for lifelong learning and professional development.

Nursing education at the master's level builds upon baccalaureate nursing preparation and is a foundation for doctoral study. Graduate education provides advanced learning to prepare specialists, educators, and administrators in the practice of nursing. College of Nursing graduate students analyze and use a variety of theoretical formulations and research findings in advanced practice, as well as plan and conduct research with guidance. The students develop expertise through self-direction, peer relations, personal valuing and faculty modeling and facilitation.

## REQUIREMENTS

### Admission to Baccalaureate Program

Five classifications of students will be considered for admission to the baccalaureate nursing program: 1) the basic student (entering freshmen), 2) the registered nurse, 3) the licensed practical nurse, 4) the postbaccalaureate student and 5) the transfer student from other colleges and universities. The College of Nursing offers separate sequences which provide both the R.N. and L.P.N. with the opportunity to earn a Baccalaureate Degree. These sequences begin nursing courses in the summer.

A transfer student may receive credit for quality work earned in approved colleges. Transfer students entering The University of Akron from an accredited institution must have all course work applicable to the College of Nursing requirements evaluated in writing by the respective University of Akron departments. A copy of the departmental course approval or denial must be contained in the student's file when the student applies for an intercollegiate transfer. Enrollment of a transfer student is contingent upon availability of University facilities and an assessment of the sufficiency of prior academic work. Transfer course grades will be combined with courses taken at The University of Akron when ranking students for College of Nursing admission.

A registered nurse (RN) who receives preparation in a diploma or associate degree program is evaluated individually. An RN/BSN student is expected to meet the same course requirements as the basic student and those of The University of Akron.

A student who wishes to be considered for admission to the College of Nursing must meet the following requirements:

- Complete all University College requirements and College of Nursing prerequisites with a grade of "C" or higher by the end of spring semester.
- Complete an Intercollegiate Transfer Form with a University College academic adviser during the designated period of the spring semester in the year that the applicant is ready to seek admission.
- Have a 2.50 grade-point average or higher.
- All grades of transfer work will be combined with those earned at The University of Akron in the computation of a GPA for admission ranking purposes to the College of Nursing.

### Admission Procedures

All applicants will be considered at once and will be selected at the end of each spring semester to start the following fall. All student applicants will be ranked in order from the highest grade-point average (GPA) down until the class is filled. Presently there are 160 students admitted to the basic program. Registered nurse students are not counted with the 160 basic students. Having a GPA of 2.5 will not guarantee admission to the College.

Acceptance of the student into the college is the responsibility of the dean in consultation with the dean of the University College and the Admissions Committee of the College of Nursing. Admission to the program in nursing does not guarantee the student's placement in the nursing courses at the time the student may wish to pursue them. The college reserves the right to approve admission to those individuals whose abilities, attitudes, and character promise satisfactory achievement of the college objectives.

Upon admission to the College, all students must adhere to the following policies and the deadline of July 31:

- Pay the Liability Insurance Fee included in the Fall tuition invoice.

† Introduction to Economics and either Introduction to Sociology or Cultural Anthropology fulfills the General Education Social Science requirements. Oral Communications fulfills the General Education Communication requirement. Basic Statistics fulfills the General Education Mathematics requirement.

**Note:** Electives. Students may select courses numbered 100 and above as electives. A list of suggested elective courses is available through Academic Advising or the College of Nursing. Electives are not prerequisite for admission to the College.

**Note:** Electives. Students may select courses numbered 100 and above as electives. A list of suggested elective courses is available through Academic Advising or the College of Nursing. Electives are not prerequisite for admission to the College.

- If a licensed nurse, show valid Ohio license to Records Coordinator.
- Complete required immunizations and physical examination.
- Complete CPR certification prior to starting nursing courses. Maintain current CPR certification throughout the program. Failure to maintain current CPR certification will result in removal from clinical courses.

Written evidence of completion of these requirements must be submitted to the College of Nursing Records Coordinator prior to July 31.

### Notification of Admission

Following completion of Spring semester, all applicants will be notified of admission by mid-June. Notification of admission status will be either full admission, placement on a waiting list, or denial due to the filling of the 160 available spaces. A limited number of students who do not receive full admission will be placed on a waiting list. The waiting list exists through the first week of Fall classes.

### Reapplication Process

Applications for the College of Nursing are only effective for the current academic year. A student not admitted from the wait list or denied admission may reapply during the next intercollegiate transfer period. Students reapplying are again ranked in the applicant group for admission consideration.

### Continuation in the Baccalaureate Program

A student must maintain a grade-point average of 2.30 (C+) or higher on a 4.00 scale in the nursing major to progress and graduate from the College. A student receiving a C- or below in any nursing course (8200) or corequisite course will be required to repeat the course. Only one course repeat is allowed during the nursing program. Students may not progress into the next course with an incomplete or failing grade.

Students should refer to their Student Handbooks for the policies and procedures of the College. Handbooks will be distributed to students upon admission to the College. Students should also refer to each course syllabus distributed at the beginning of each semester for course expectations/requirements.

### Requirements for Graduation

- Complete all University requirements as listed in Section 3 of this Bulletin.
- Complete a minimum of 134 semester credits for the degree and earn a minimum of 2.30 grade-point average in the nursing major and a 2.00 grade-point average for all collegiate work attempted at The University of Akron.
- Complete all courses required in the Program of Study for Nursing Students.
- Complete the last 32 credits in the baccalaureate program at The University of Akron.
- Complete all requirements which were in effect at the time of transfer to the College of Nursing.

### Basic Baccalaureate Program

#### Freshman Year (Prerequisite Courses)

	Credits
3300:111,112 English Composition I, II	7
5540:120-190 Physical Education	1
3100:130 Principles of Microbiology	3
3150:129,130 Introduction to General, Organic and Biochemistry	8
3750:100 Introduction to Psychology	3
3250:100 Introduction to Economics†	3
3600:120 Introduction to Ethics	3
3850:100 Introduction to Sociology†	4
or	
3870:150 Cultural Anthropology†	4
8200:100 Introduction to Nursing Electives	1
	2

#### Transfer to the College of Nursing

##### Sophomore Year

3100:208,209 Anatomy and Physiology	8
3470:260 Basic Statistics†	3
or	
3470:261,262 Statistics I, II	4
3750:230 Developmental Psychology	4
7600:106 Oral Communications†	3

8200:205 College of Nursing Orientation	1
8200:215 Professional Role Development	2
8200:210 Basic Concepts of Nursing	4
8200:220 Foundations of Nursing Practice	5
8200:225 Health Assessment	3

##### Junior Year

7400:316 Science of Nutrition	4
8200:315 Pathophysiology for Nurses	3
8200:325 Cultural Dimensions in Nursing	2
8200:330 Nursing Pharmacology	3
8200:350 Nursing of Childbearing Families	5
8200:360 Nursing of Adults	5
8200:370 Nursing of Older Adults	5
8200:380 Mental Health Nursing	5

##### Senior Year

3400:210 Humanities in the Western Tradition I	4
Humanities Elective	3
Area Studies/Cultural Diversity Requirement	2
Area Studies/Cultural Diversity Requirement	2
8200:410 Nursing of Families with Children	5
8200:430 Nursing in Complex/Critical Situations	3
8200:435 Nursing Research	3
8200:440 Nursing of Communities	5
8200:445 Nursing Leadership for Client Care	2
8200:450 Senior Practicum	3
8200:455 Professional Issues	2
Total minimum credits for graduation:	134

### R.N./B.S.N. Registered Nurse Sequence

(this sequence limited to registered nurse graduates of Associate Degree and Diploma nursing programs)

#### Prerequisite Courses

##### Freshman Year

3300:111,112 English Composition	7
3100:130 Principles of Microbiology	3
3150:129,130 Introduction to General, Organic and Biochemistry	8
3750:xxx Introduction to Psychology	3
5540:120-190 Physical Education	1
3600:120 Introduction to Ethics	3
3850:100 Introduction to Sociology	4
or	
3850:150 Cultural Anthropology	4

##### Sophomore Year

3100:208,209 Anatomy & Physiology	8
3250:100 Introduction to Economics	3
3750:230 Developmental Psychology	4
7600:106 Oral Communication	3
3470:260 Basic Statistics	3
or	
3470:261,262 Introduction Statistics I, II	4
Electives	6-7

#### Transfer to the College of Nursing

##### Summer Session Start

8200:336 Concepts of Professional Nursing	4
8200:225 Health Assessment	3
8200:325 Cultural Dimensions in Nursing	3
3400:210 Humanities in the Western Tradition I	4

##### Fall

Area Studies/Cultural Diversity	2
8200:405 Nursing of the Healthy Individual†	5
8200:440 Nursing of Communities†	5
8200:435 Nursing Research	3

##### Spring

Humanities Requirement	3-4
Area Studies/Cultural Diversity Requirement	2
8200:415 Nursing Care of Individuals with Complex Health Problems†	5
8200:446 Professional Nursing Leadership†	5

**Note:** By-pass credit upon successful completion of 8200:415 and 446, 34 hours of by-pass credit will be awarded for courses in the basic program. Total credits for graduation are 134.

† Courses 8200:405, 415 and 446 are eight (8) weeks in length.

**LPN/BSN Sequence**

**Freshman Year (Prerequisite Courses)**

Fall		Credits
3300:111	English Composition I	4
5540:120-190	Physical Education	1
3150:129	Introduction to General, Organic and Biochemistry	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	4
	or	
3870:150	Cultural Anthropology	4
<b>Spring</b>		
3300:112	English Composition II	3
3100:130	Principles of Microbiology	3
3150:130	Introduction to General, Organic and Biochemistry	4
3250:100	Introduction to Economics	3
3600:120	Introduction to Ethics	3
8200:101	Introduction to Baccalaureate Nursing	1
	Electives	3

**Transfer to the College of Nursing**

**Note:** After satisfactory completion of prerequisites, transfer to the College of Nursing. There are two options for the LPN/BSN Sequence after completion of prerequisites. Option 1 follows the more traditional path and takes the student 3 years plus the summer sessions to complete. Option 2 allows the student to graduate in 2 1/2 years plus the summer session provided that 8200:220 Foundations in Nursing Practice is waived by testing. NLN Mobility Profiles, Skills and Math Competency Testing are conducted during late May and early June.

**Option 1 (Includes 8200:220)**

**Sophomore Year**

Summer session start		
8200:336	Concepts of Professional Nursing	4
<b>Fall</b>		
8200:210	Basic Concepts of Nursing	4
3100:208	Anatomy & Physiology	4
7600:106	Oral Communications	3
3470:260	Basic Statistics	3
	or	
3470:261,262	Introductory Statistics I, II	4
<b>Spring</b>		
8200:220	Foundations of Nursing Practice	5
8200:225	Health Assessment	3
3100:209	Anatomy & Physiology	4
3750:230	Develop. Psychology	4

**Junior Year**

Fall		
8200:315	Pathophysiology for Nurses	3
8200:360	Nursing of Adults	5
8200:370	Nursing of Older Adults	5
7400:316	Science of Nutrition	4
<b>Spring</b>		
8200:330	Nursing Pharmacology	3
8200:350	Nursing of Childbearing Families	5
8200:380	Mental Health Nursing	5
8200:325	Cultural Dimensions in Nursing	2

**Senior Year**

Fall		
8200:430	Nursing in Critical/Complex Situations	3
8200:450	Senior Practicum	3
8200:435	Nursing Research	3
8200:445	Nursing Leadership for Client Care	2
	Area Studies/Cultural Diversity	2
3400:210	Humanities in the Western Tradition I	4
<b>Spring</b>		
8200:430	Nursing of Families with Children	5
8200:440	Nursing of Communities	5
3400:385-391	World Civilizations	2
	Humanities elective	3

**LPN/BSN Sequence**

**Option 2 (Excluding 8200:220)**

**Sophomore Year**

Summer session start		
8200:336	Concepts of Professional Nursing	4
8200:225	Health Assessment	3
3400:210	Humanities in the Western Tradition I	4

Fall		Credits
8200:210	Basic Concepts of Nursing	4
3100:208	Anatomy & Physiology	4
7600:106	Effective Oral Communication	3
3470:260	Basic Statistics	3
	or	
3470:262,262	Introduction to Statistics I, II	4
<b>Spring</b>		
3100:209	Anatomy & Physiology	4
3750:230	Develop. Psychology	4
8200:360	Nursing of Adults	5
8200:370	Nursing of Older Adults	5

**Junior Year**

Fall		
8200:315	Pathophysiology for Nurses	3
8200:350	Nursing of Childbearing Families	5
8200:380	Mental Health Nursing	5
7400:316	Science of Nutrition	4
<b>Spring</b>		
8200:430	Nursing of Families with Children	5
8200:440	Nursing of Communities	5
	Area Studies/Cultural Diversity Requirement	2
8200:325	Cultural Dimensions in Nursing	2
8200:330	Nursing Pharmacology	3

**Senior Year**

Fall		
8200:430	Nursing in Critical/Complex Situations	3
8200:450	Senior Practicum	3
8200:435	Nursing Research	3
8200:445	Nursing Leadership for Client Care	2
	Area Studies/Cultural Diversity Requirement	2
3400:210	Humanities in the Western Tradition I	4

**Note:** Credit for prior learning. The LPN/BSN student who receives a score of 75 or higher on the NLN Mobility Profiles and successfully complete skills testing will receive a range of possible credits for the following courses:

8200:220	Foundations of Nursing Practice	0 to 5 credits
8200:330	Nursing Pharmacology based on pharmacology certification and score of C or higher on N330 final examination.	0 to 3 credits
8200:350	Nursing of Childbearing Families	0 to 1 credit
8200:360	Nursing of Adults	0 to 1 credit
8200:370	Nursing of Older Adults	0 to 1 credit
8200:410	Nursing of Families with Children	0 to 1 credit

Students who receive full credit for 8200:220 will be exempt from the course. Students receiving one credit for any of the remaining courses will be exempted from one clinical day and selected Learning Resource Center activities based on the results of skill testing. Students also have the option of testing out of 8200:330 Nursing Pharmacology.

Total minimum credits for graduation: 134

**Agencies**

Some of the agencies which provide clinical experiences for the baccalaureate program are:

Akron City Hospital	Haven of Rest
Akron General Medical Center	Henry Center for Child Care and Learning
Akron Health Department	Homeless Outreach Program
Akron Public Schools: Lincoln	Pebble Creek Care Center
Barberton Citizens Hospital	Portage Path Community Mental Health Center
Barberton Health Department	Red Cross
Brecksville Veterans Administration Hospital	Rockynol Retirement Community
Chambrel at Montrose	St. Thomas Medical Center
Children's Hospital Medical Center	Summit County Health Department
College of Nursing, Center for Nursing	University Center for Child Development
Community Support Services	Village at St. Edward
Copley Health Center	Visiting Nurse Service, Summit County
Edwin Shaw Hospital	Visiting Nurse Service, Stark County

# Northeastern Ohio Universities College of Medicine

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## HISTORY AND PURPOSE OF THE COLLEGE OF MEDICINE

The Northeastern Ohio Universities College of Medicine (NEOUCOM) was created by an act of the 100th General Assembly of Ohio and was officially established as a public institution of higher learning on November 23, 1973. The college is governed by a board of trustees appointed by the boards of trustees of The University of Akron, Kent State University and Youngstown State University. All three universities are accredited by the North Central Association of Colleges and Secondary Schools. The college was first accredited by the Liaison Committee on Medical Education of the Association of American Medical Colleges in May 1981, and in 1989 received full re-accreditation from the LCME for a seven-year period.

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## ADMISSION: B.S./M.D.

High school seniors and recent high school graduates, having demonstrated appropriate academic competence and motivation toward a career in medicine, will be considered for admission into the B.S./M.D. program. Students who have not attended college should write to the Office of Admissions, The University of Akron, Akron, OH 44325-2001 for application forms. Applicants should indicate interest in the Phase I, B.S./M.D. Program and return all forms prior to December 31.

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## ADMISSION: M.D.

Applicants with a more traditional college background may be considered by NEOUCOM for admission to the M.D. Program (Phase II). Students should contact the Northeastern Ohio Universities College of Medicine, Rootstown, OH 44272, for further information. Criteria for admission to the M.D. Program include demonstrated proficiency in appropriate coursework, scores from the Medical College Admission Test (MCAT) taken at least one year prior to anticipated fall enrollment date, as well as a commitment to the field of medicine and extracurricular and work activities.

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## THE B.S./M.D. PROGRAM

The curriculum\* requires that the student be enrolled for 11 months in each of six academic years. The first two years (Phase I) are spent on one of the consortium university campuses. The course work during this period focuses chiefly on studies in the humanities, social sciences, and all basic premedical sciences but will also include orientation to clinical medicine. Progress through Phase I will be based on academic performance and development of personal maturity appropriate to assumption of professional responsibility. The Phase I Academic Review and Promotion Committee, including University and College of Medicine faculty, will assess these factors and will recommend the Phase I student for promotion and formal admission to Phase II, or the third year of the program.

The third year of study is devoted primarily to the basic medical sciences, e.g., anatomy, physiology, microbiology, etc., and will be conducted at the NEOUCOM campus in Rootstown.

In years four, five and six, the student will develop competence in the clinical aspects of medicine through instruction provided principally at one or more of the associated community hospitals. Successful completion of the six-year program leads to the award of the Bachelor of Science degree by one of the universities and the Doctor of Medicine degree by the College of Medicine.

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## COST

Normal undergraduate fees will be assessed for years one and two. Fees for years three through six are set by the College of Medicine Board of Trustees and are commensurate with those at publicly supported medical schools elsewhere in this state.

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## LOCATION

The NEOUCOM campus is located on S.R. #44 in Rootstown just south of the I-76 intersection, across from the Rootstown High School.

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For a description of the requirements for the Bachelor of Science portion of this program, see B.S./M.D. Program listed in Section 4 of this Bulletin Under Buchtel College of Arts and Sciences.



5

Minor  
areas  
of study

The College of Business  
Administration Building

# Minor Areas of Study

## REQUIREMENTS

The University of Akron has approved minor fields of study that may be placed on a student's record when all requirements have been completed.

The following rules apply to all minors:

- The student must complete at least 18 credits. (Note: some minors may require additional credits).
- At least six of the 18 credits must be at the 300/400 level, except where the department does not offer 300/400 level courses.
- A minimum grade-point average of 2.0 in each minor is required.
- A minor may be designated at any time during the student's career up to and including the time the degree clearance is processed.
- A minor will be placed on the student's record only at the time the student receives a baccalaureate degree and only on application.
- Courses for a minor may not be taken credit/non-credit. All credits must be earned (bypassed credit may not be used).
- The student must earn at least nine credits at The University of Akron in courses approved by the faculty granting the minor. Written permission of the dean and the head of the department which grants the minor is required for an exception.
- Courses required for a minor may carry prerequisites, which must be honored before the student may enroll.

## ADVISEMENT

Although not required to do so, students are advised to contact faculty in the department(s) in which they may wish to earn minors early in their undergraduate programs.

## SPECIFIC PROGRAM REQUIREMENTS

(All programs listed in alphabetical order)

### Anthropology

		Credits
3870:150	Cultural Anthropology	4
3870:151	Evolution of Man and Culture	3
3870:356	Archaeology of the Americas	3
3870:461	Language and Culture	3

- A minimum of six additional credits of anthropology courses.
- Nineteen total credits are required.

### Art

#### Art History

7100:100	Survey of History of Art I	4
7100:101	Survey of History of Art II	4
7100:300	Art since 1945	3
7100:302	Art in Europe during the 17th and 18th Centuries	3
7100:303	Renaissance Art in Italy	3
7100:304	Art in Europe during the 19th Century	3
7100:400	Art in the U.S. before World War II	3
7100:401	Special Topics in History of Art	3
7100:405	History of Art Symposium	3
7100:498	Special Problems in History of Art	1-3

### Art

- Foundations curriculum need not be completed.
- Prerequisites must be honored.
- Student may complete any department courses except 7100:191.

### Ceramics

		Credits
7100:254	Introduction to Ceramics	3
7100:354	Ceramics II	3
7100:454	Advanced Ceramics	3

(May be repeated for a total of 15 credits.)

### Commercial Photography (Inactive)

2240:110	Multi-Image Production	3
2240:122	Introduction to Commercial Photography	3
2240:210	Portrait/Fashion Photography	3
2240:224	Illustration/Advertising Photography	3
2240:250	Advanced Commercial Photography	3
7100:275	Introduction to Photography	3

### Computer Imaging

- Requirements: Five courses in Computer Art and one of the following:

7100:100	Survey of History of Art I	4
7100:105	Understanding Art	3
7100:401	History of Graphic Design and portfolio review prior to the third computer art course	3

### Drawing

- Select from the following:

7100:131	Introduction to Drawing	3
7100:132	Instrument Drawing	3
7100:231	Drawing II	3
7100:233	Life Drawing	3
7100:283	Drawing Techniques	3
7100:331	Drawing III	3
7100:333	Advanced Life Drawing	3
7100:431	Drawing IV	3
7100:484	Illustration	3
7100:485	Advanced Illustration	3

### Fiber Arts

7100:244	Color Concepts	3
7100:293	Introduction to Fiber Arts	3
7100:294	Surface Design on Fabric	3
7100:295	Forms and Fibers	3

### Graphic Design

- Select from the following:

7100:184	Graphic Design I	3
7100:283	Drawing Techniques	3
7100:286	Graphic Design II	3
7100:288	Letterform and Typography	3
7100:380	Graphic Video	3
7100:386	Packaging Design	3
7100:387	Advertising Layout and Design	3
7100:388	Advertising Production Design	3
7100:480	Advanced Graphic Design	3
7100:482	Corporate Identity	3
7100:484	Illustration	3
7100:485	Advanced Illustration	3
7100:488	Publication Design	3

### Illustration

7100:185	Computer Graphics for Art I	3
7100:283	Drawing Techniques	3
7100:333	Advanced Life Drawing	3
7100:480	Advanced Graphic Design/Illustration Portfolio	3
7100:484	Illustration	3
7100:485	Advanced Illustration	3

(Advanced Illustration must be taken twice for a total of six credits)

### Metalsmithing

- Select from the following:

		Credits
7100:266	Introduction to Metalsmithing	3
7100:268	Color in Metals	3
7100:366	Metalsmithing II	3
7100:368	Color in Metals II	3
7100:466	Advanced Metalsmithing	3

### Painting

- Select from the following:

7100:245	Introduction to Polymer Acrylic Painting	3
7100:246	Introduction to Water Color Painting	3
7100:247	Introduction to Oil Painting	
7100:248	Introduction to Airbrush Painting	
7100:249	Figure Painting	3
7100:348	Painting II	3
7100:449	Advanced Painting	3

**NOTE:** Painting II must be taken in a medium taken previously at the introductory level. May be repeated for a total of nine credits but limited to a maximum of three credits in any of the three media.

**NOTE:** May be repeated for a total of 15 credits.

### Photography

2240:122	Introduction to Commercial Photography	3
7100:275	Introduction to Photography	3
7100:370	History of Photography	3
7100:375	Photography II	3
7100:475	Advanced Photography (may be repeated)	3
7100:477	Advanced Photography: Color	3

### Printmaking

7100:213	Introduction to Lithography	3
7100:214	Introduction to Screen Printing	3
7100:215	Introduction to Relief Printing	3
7100:216	Introduction to Intaglio Printing	3
7100:317	Printmaking II	3
7100:418	Advanced Printmaking	3

### Sculpture

7100:222	Introduction to Sculpture	3
7100:254	Introduction to Ceramics	3
	or	
7100:266	Introduction to Metalsmithing	3
7100:321	Figurative Sculpture	3
7100:322	Sculpture II	3
7100:323	Casting	3
7100:422	Advanced Sculpture	3

### Biology

- Total credits required for a minor in biology: 23-24.

3100:111,2	Principles of Biology I, II	8
3100:211	General Genetics	3
3100:217	General Ecology	3
3100:311	Cell Biology	3
	or	
3100:130	Principles of Microbiology	3
	or	
3100:331	Microbiology	4
3100:316	Evolutionary Biology	3
3100:xxx	A 300/400-level course approved by department head	—

### Business Administration

- Total credits required for a minor in Business Administration: 27

		Credits
6200:201	Accounting Concepts and Principles for Business	3
6200:202	Managerial Accounting	3
6200:250	Computer Applications for Business	3
6400:220	Legal and Social Environment of Business	3
6400:371	Business Finance	3
6500:221	Quantitative Business Analysis I	3
6500:222	Quantitative Business Analysis II	3
6500:301	Management Principles and Concepts	3
6600:300	Marketing Principles	3

### Business Management

- Total credits required for a minor in Business Management: 18

6500:301	Management: Principles and Concepts	3
6500:310	Business Information Systems	3
6500:330	Principles of Operations Management	3
6500:341	Human Resource Management	3
6500:3XX or 4XX	Management Electives	6

### Business Management Technology

2040:247	Survey of Basic Economics	3
2420:101	Elements of Distribution	3
2420:103	Role of Supervision in Management	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Law	3
2420:xxx	Elective	3
Choose elective from the following:		
2420:170	Business Mathematics	3
	or	
2420:212	Basic Accounting II	3
	or	
2420:243	Survey in Finance	3

### Chemistry

- Total credits required for a minor in chemistry: 19-22.

- Core comprised of the following:

3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:263,4	Organic Chemistry Lecture I, II	6

- An additional six credits from 300/400-level chemistry courses. For example, a pre-med, medical technology, or biology student might take 3150:401,2 Biochemistry (three credits each). An engineering or physics major might select 3150:313,4 Physical Chemistry (three credits each). Analytical or instrumental courses might be attractive to others.

- Chemical engineering majors automatically fulfill the requirements for a minor in chemistry.

- Students who intend to minor in chemistry should seek advice from the Chemistry Department about the 300/400-level courses that would be most relevant to their interests.

### Classics

- Total credits required for a minor in classics: 21 credits.

3200:189	Mythology	3
3200:313/14	Archaeology of Greece and Rome	6
	or	
3200:361/2	Literature of Greece and Rome	6
3210:303,4	Advanced Greek	6
	or	
3220:303,4	Advanced Latin	6
	Electives in Classics 6	

- It is strongly recommended that a minor in classics take at least three credits of 3400:307, 308, 312, 313 Ancient History.

## Classical Civilization

		Credits
3200:189	Mythology	3
3200:313,14	Archaeology of Greece and Rome	6
3200:361,2	Literature of Greece and Rome	6
3400:307,8,12,13	Ancient History (select one)	3
	Electives in Classics	3

- It is strongly recommended that a minor in classical civilization fulfill the language requirement by taking 3220:121,2,223,4 or 3210:121,2,223,4.

## Communicative Disorders

- Required core courses:
 

7700:110	Introduction to Disorders of Communication	3
7700:120	Introduction to Audiology/Aural Rehabilitation	4
7700:130	Bases and Structure of Languages	3
7700:211	Introduction to Speech Science	2
7700:430	Aspects of Normal Language Development	3
- Select at least four hours from the following:
 

7700:460	Speech-Language Hearing Disorders in the Public Schools	2
7700:480	Seminar in Communicative Disorders	2
7700:481	Special Projects: Communicative Disorders	1-3
7700:483	Communication Disorders: Geriatric Population	3

## Community Services Technology

2040:240	Human Relations	3
2260:100	Introduction to Community Services	3
2260:150	Introduction to Gerontological Services	3
2260:260	Alcohol Use and Abuse	3
2260:240	Chemical Dependency	3
2260:278	Techniques of Community Work	4

## Computer Programming Technology

2440:120	Computer and Software Fundamentals	2
2440:121	Introduction to Programming Logic	2
2440:131	Introduction to Programming	2
2440:133	Structured COBOL Programming	3
2440:234	Advanced COBOL Programming	3
2440:241	Systems Analysis and Design	3
2440:239	RPG II Programming	2
2440:xxx	Technical Electives (See advisor for options)	2-3

## Consumer Marketing

- Required courses — 15 credits
 

6600:300	Marketing Principles	3
6160:301	Essentials of Promotion	3
6160:303	Essentials of Selling	3
6160:305	Essentials of Retailing	3
6160:307	Essentials of Buyer Behavior	3
- Elective courses (choose one) - 3 credits
 

6160:309	Essentials of Retail Merchandising	3
6800:305	International Business	3

## Criminal Justice Technology

- Core courses:
 

2220:100	Introduction to Criminal Justice	3
2220:102	Criminal Law for Police	3
2220:104	Evidence and Criminal Legal Process	3
- Additional courses for general criminal justice minor:
 

2220:240	Dynamics of Vice Crime and Substance Abuse	3
2220:250	Criminal Case Management	6
2250:260	Administration and Supervision in the Public Service	3
- Additional courses for corrections area of concentration:
 

3850:100	Introduction to Sociology	4
3850:330	Criminology	3
3850:431	Corrections	3
	or	
3850:429	Probation and Parole	3
- Additional courses for security area of concentration:
 

2220:101	Introduction to Security	4
2230:104	Fire Investigation Methods	3
2230:204	Fire Hazards Recognition	3
2220:290	Special Topics in Security	3

## Dance

7900:115	Dance as an Art Form	2
7900:119*	Modern I: Introduction to Modern Dance I	2
7900:120*	Modern II: Introduction to Modern Dance II	2
7900:124*	Introduction to Ballet I	2
7900:125*	Introduction to Ballet II	2
7900:224*	Ballet III: Intermediate Beginner A	3
	or	
7900:219*	Modern III: Intermediate Beginner A	2
7900:130*	Introduction to Jazz Dance I	2
	or	
7900:144*	Introduction to Tap Technique I	2
7920:316	Choreography I	2

- Choose one (total of 2 credits):
 

7920:431	Dance History: Prehistory to 1661	2
7920:432	Dance History: 1661 through Diaghilev Era	2
7920:433	Dance History: Twentieth Century	2
- Choose one (total of 2 credits):
 

7920:317	Choreography II	2
7920:320	Dance Notation#	2
7920:361	Learning Theory for Dance	2

## Economics

- One of the following:
 

3250:200,201	Principles of Economics	6
3250:244	Introduction to Economics Analysis	3
- One of the following:
 

3250:400	Intermediate Macroeconomics	3
3250:410	Intermediate Microeconomics	3
- Electives in Economics
- All students are encouraged to consult with the Undergraduate Student Advisor in the Economics Department about the best choice of coursework. Students are advised to consider taking both 3250:400 Intermediate Macroeconomics and 3250:410 Intermediate Microeconomics. Check bulletin listings or call department about special topics courses (3250:440) offered each semester and summer. Some courses of particular interest are listed below.
- Recommended electives for majors in Mathematical Disciplines:
 

3250:420	Mathematical Economics I	3
3250:421	Mathematical Economics II	3
3250:426	Econometric Methods and Applications	3
3250:427	Economic Forecasting	3

\*See school director for level placement

#By advisement only.

- Recommended electives for majors in International Business:
 

3250:450	Comparative Economic Systems	3
3250:460	Economic Development	3
3250:461	Principles of International Economics	3
- Recommended electives for majors in Business:
 

3250:360	Industrial Organization and Public Policy	3
3250:380	Money and Banking	3
3250:481	Monetary and Banking Policy	3

**Labor Economics**

- Required:
 

3250:410	Intermediate Microeconomics	3
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- One of the following:
 

3250:200,201	Principles of Economics	6
3250:244	Introduction to Economic Analysis	3
- Choose at least two of the following:
 

3250:330	Labor Problems	3
3250:333	Labor Economics	3
3250:430	Labor Market Policy	3
3250:431	Labor and the Government	3
3250:432	The Economics and Practice of Collective Bargaining	3
- Electives in Economics (3-6)

**NOTE:** All students are encouraged to consult with the Undergraduate Student Advisor in the Economics Department about your best choices of coursework.

**English**

**English**

Any 18 hours of courses in the English Department with at least 6 of those hours at the 300/400 level.

**English Literature**

Any 18 hours of courses in British literature with at least 6 of those hours at the 300/400 level.

**American Literature**

Any 18 hours of courses in American literature with at least 6 of those hours at the 300/400 level.

**Professional Writing**

- Required
 

3300:390,391	Professional Writing I, II (Do not have to be taken in sequence)	6
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- One from the following:
 

3300:376	Legal Writing	3
3300:489	Management Reports	3
3300:489	Science Writing	3
- One departmental linguistics or language course.
- Two additional courses from any of the literature, language or writing offerings in the department.

**Creative Writing**

- Two introductory courses in creative writing from the following:
 

3300:277	Introduction to Poetry Writing	3
3300:278	Introduction to Fiction Writing	3
3300:279	Introduction to Script Writing	3
- One advanced course in creative writing from the following:
 

3300:377	Advanced Poetry Writing	3
3300:378	Advanced Fiction Writing	3
3300:389	Advanced Script Writing	3
- One literature course primarily concerned with modern work.
- Two additional courses from any of the literature or language offerings of the department, which may include a second advanced course in creative writing.

**Finance for Business Majors**

The Finance Minor for Business Majors provides an opportunity to earn a recognized study in Finance while completing a major in another department of the College of Business Administration.

- Required Core Courses (9 credits)
 

6400:338	Financial Markets and Institutions	3
6400:343	Investments	3
6400:379	Advanced Business Finance	3
- And Three of the Following Courses (9 credits):
 

6400:323	International Business Law	3
6400:325	Business and Society	3
6400:332	Personal Financial Planning	3
6400:390	Real Estate Principles: A Value Approach	3
6400:401	Real Estate Investment	3
6400:402	Income Property Appraisal	3
6400:403	Real Estate Finance	3
6400:413	Property and Liability Insurance	3
6400:414	Life and Health Insurance	3
6400:415	Risk Management and Insurance	3
6400:424	Legal Concepts of Real Estate Law: A Managerial Approach	3
6400:436	Commercial Bank Management	3
6400:447	Security and Portfolio Analysis	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial and Consumer Credit Management	3
6400:481	International Business Finance	3
6400:490	Selected Topics in Finance	3
6400:495	Internship in Finance	1-3

**Financial Services for Non-Business Majors**

The professional opportunities in the financial services areas of banking, insurance, real estate, and financial planning are expanding rapidly. This program provides the non-business major an opportunity to develop career-focused skills in the financial services area.

- Required (6 credits)
 

6140:331	Personal Finance	3
6140:370	Introduction to Finance	3
- Electives (12 credits)
 

6200:410	Taxation for the Non-Accountant	3
6400:325	Business and Society	3
6400:338	Financial Markets and Institutions	3
6400:343	Investments	3
6400:390	Real Estate Principles: A Value Approach	3
6400:401	Real Estate Investment	3
6400:402	Income Property Appraisal	3
6400:403	Real Estate Finance	3
6400:413	Property and Liability Insurance	3
6400:414	Life and Health Insurance	3
6400:415	Risk Management and Insurance	3
6400:424	Legal Concepts of Real Estate Law: A Managerial Approach	3
6400:436	Commercial Bank Management	3

**Fire Protection**

- |          |   |   |
|----------|---|---|
| 2230:100 | Introduction to Fire Protection                 | 3 |
| 2230:102 | Fire Safety in Building Design and Construction | 3 |
| 2230:104 | Fire Investigation Methods                      | 3 |
| 2230:153 | Principles of Fire Protection and Life Safety   | 3 |
| 2230:204 | Fire Hazards Recognition                        | 3 |
| 2230:205 | Fire Detection and Suppression Systems I        | 3 |

## Geography and Planning

### General Geography

		Credits
3350:310	Physical and Environmental Geography	3
3350:320	Economic Geography	3
3350:330	Rural and Urban Settlement	3
3350:341	Maps and Map Reading	3

- The remaining six credits are to be selected from any geography offerings, except 3350:100.

### Planning

- Students must complete 19 semester credits of course work as follows:

3350:385	Planning Seminar	1
3350:433	Introduction to Planning	3
3350:496	Soil and Water Field Studies	3

- At least two courses (six credits) from the following:

3350:335	Recreation Resource Planning	3
3350:422	Transportation System Planning	3
3350:428	Industrial and Commercial Site Location	3
3350:436	Urban Land Use Analysis	3

- At least two courses (six credits) from the following:

3350:340	Cartography	3
3350:405	Geographic Information Systems	3
3350:447	Introduction to Remote Sensing	3
3350:483	Spatial Analysis	3
3350:496	Field Research Methods	3

### Cartography

- At least five courses (15 credits) from:

3350:340	Cartography	3
3350:405	Geographic Information Systems	3
3350:442	Thematic Cartography	3
3350:444	Map Compilation and Reproduction	3
3350:447	Introduction to Remote Sensing	3
3350:448	Automated Computer Mapping	3
3350:449	Advanced Remote Sensing	3

- At least one course (three credits) from:

3350:481	Geographic Research Methods	3
3350:483	Spatial Analysis	3
3350:496	Field Research Methods	3

## Geology

- Minimum of 20 credits of departmental courses; 17 of which must be in courses having a laboratory.
- Student should consult with the department faculty adviser for minors.

## History

- Twelve of the 18 credits must be at the upper-division level (300/400). A combination of courses in United States and non-United States history is required.
- A student may work primarily in United States history, European, Medieval, Latin American and the like, provided in both cases there is some combination or distribution between United States and non-United States history.

## Home Economics and Family Ecology

### Apparel Design and Construction

7400:121	Textiles	3
7400:123	Fundamentals of Construction	3
7400:305	Advanced Construction & Tailoring	3
7400:311	Contemporary Needle Arts	3
7400:449	Flat Pattern Design	3
7400:xxx	Elective in Clothing and Textiles Area	3

## Fashion

		Credits
7400:121	Textiles	3
7400:219	Clothing Communication	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:239	The Fashion and Furnishings Industries	3
7400:437	Historic Costume to 1800	3
7400:438	or History of Fashion Since 1780	3
7400:xxx	Elective in Clothing and Textiles Area	3

## Clinical Nutrition

7400:133	Nutrition Fundamentals	3
7400:328	Nutrition in Medical Science I	4
7400:424	Nutrition in the Life Cycle	3
7400:426	Therapeutic Nutrition*	4
7400:428	Nutrition in Medical Science II	5
7400:488	Practicum in Dietetics	1-3

## Community Nutrition

7400:133	Nutrition Fundamentals	3
7400:380	Introduction to Community Nutrition	1
7400:424	Nutrition in the Life Cycle	3
7400:426	Therapeutic Nutrition*	4
7400:480	Community Nutrition I	3
7400:482	Community Nutrition II	3
7400:488	Practicum in Dietetics	1-3

## Consumer Services Minor

(Prerequisites must be honored.)

7400:301	Consumer Education	3
7400:302	Consumers of Services	3
7400:303	Children as Consumers	3
7400:362	Family Life Management	3
7400:406	Family Financial Management	3
7400:455	Public Policy and the American Family	3

## Food Systems Administration

2280:238	Cost Control Procedures	3
6500:341	Personnel Management*	3
7400:133	Nutrition Fundamentals	3
7400:245	Food Theory and Applications I	3
7400:310	Food Systems Management I	5
7400:315	Food Systems Management I, Clinical	2
7400:413	Food Systems Management II	3

## Food Science

7400:245	Food Theory and Application I	3
7400:246	Food Theory and Application II	3
7400:403	Advanced Food Preparation	3
7400:420	Experimental Foods	3

The remaining six credits may be selected from the following:

7400:470	The Food Industry: Analysis and Field Study	3
7400:474	Cultural Dimensions of Food	3
7400:475	Analysis of Foods	3
7400:476	Development in Food Science	3
7400:485	Seminar (Food Science related)	3

## Family Development

(Prerequisites must be honored.)

7400:201	Courtship, Marriage and the Family	3
7400:265	Child Development	3

The remaining 12 credits may be selected from the following:

7400:255	Fatherhood: The Parent Role	2
7400:360	Parent-Child Relations*	2
7400:362	Family Life Management	3
7400:390	Family Relationships in Middle and Later Years	3
7400:401	Family-Life Patterns in Economically Deprived Homes	2
7400:404	Adolescence in the Family Context*	3
7400:440	Family Crisis	3
7400:442	Human Sexuality*	3
7400:445	Public Policy and the American Family	3
7400:496	Parenting Skills*	3

\* Prerequisites required.

**Child Development**

(Prerequisites must be honored.)

7400:201	Courtship, Marriage and the Family	Credits	3
7400:265	Child Development		3
The remaining 12 credits may be selected from the following:			
7400:132	Early Childhood Nutrition		2
7400:255	Fatherhood: The Parental Role		2
7400:270	Theory and Guidance of Play		3
7400:280	Creative Activities for Pre-kindergarten Children		4
*Prerequisites required.			
7400:360	Parent-Child Relations*		3
7400:401	Family-Life Patterns in Economically Deprived Homes		2
7400:404	Adolescents in the Family Context*		3
7400:460	Organization and Supervision of Child-Care Centers		3
7400:496	Parenting Skills*		3

**Hospitality Management**

**Restaurant Management**

2280:121	Fundamentals of Food Preparation I	4
2280:122	Fundamentals of Food Preparation II	4
2280:135	Menu Planning and Purchasing	3
2280:232	Dining Room Service and Training	2
2280:233	Restaurant Operations and Food Management	4
2280:238	Cost Control Procedures	3

**Culinary Arts**

2280:121	Fundamentals of Food Preparation I	4
2280:122	Fundamentals of Food Preparation II	4
2280:123	Meat Technology	2
2280:160	Wine and Beverage Service	3
2280:232	Dining Room Service and Training	2
2280:261	Baking and Classical Desserts	3
2280:262	Classical Cuisine	3
2280:263	International Foods	2

**Hotel/Motel Management (Inactive)**

2280:150	Front Office Procedures	3
2280:152	Maintenance and Engineering for Hotels and Motels	3
2280:153	Principles of Fire Protection and Life Safety	3
2280:240	System Management and Personnel	3
2280:254	Hotel/Motel Housing Management	3
2280:255	Hotel/Motel Sales Promotion	3
2280:256	Hospitality Law	3

**International Business**

The International Business Minor is a program for students who are interested in having sufficient understanding of international business and its environments without having to study a functional area of business administration. Students in the International Business Minor are eligible to participate in the business administration foreign exchange programs. Courses offered through The University of Akron foreign business partner schools may substitute for both electives and one required course.

- Required: Complete all courses – 12 credits

6600:300	Marketing Principles	3
6600:385	International Marketing	3
6800:305	International Business	3
6800:405	Multinational Corporations	3

- Electives: Complete two (2) courses – 6 credits

3250:450	Comparative Economic Systems	3
3250:461	Principles of International Economics	3
3700:300	Comparative Politics	4
3700:312	Politics of International Trade and Money	3
6400:323	International Business Law	3
6400:481	International Business Finance	3
6500:457	International Management	3
6800:421	International Business Practices	3

**Library (Inactive)**

- Courses are offered in alternate years.

- Students are encouraged to take 2540:140 Keyboarding for Non-Majors before taking library courses.

2200:100	Introduction to Library Technology	Credits	3
2200:201	Cataloging, Classifying and Processing Materials		3
2200:202	Organizing and Operating Library/Media Centers		3
2200:203	Materials Selection		2
2200:204	Reference Procedure		3
2200:205	Information Retrieval Systems in Library Technology		3
2200:297	Independent Study		1
(Student pursues a project in major area of study utilizing library skills.)			

**Marketing and Sales Technology**

2520:103	Principles of Advertising	3
2520:106	Visual Promotion	3
2520:202	Retailing Fundamentals	3
2520:211	Math of Retail Distribution	3
2520:212	Principles of Sales	3
and any TWO of the following:		
2520:215	Advertising Projects	2
2520:217	Merchandising Projects	2
2520:219	Sales Projects	2
2520:221	AAF Ad Campaign I	2
2520:222	AAF Ad Campaign II	2
2520:234	Humor in Advertising	2

- To be awarded only at the time a student receives a baccalaureate degree.

**Mathematical Sciences**

- Total credits required for minors are as follows:

Mathematics/Applied Mathematics	24
Statistics	25
Computer Science	28

**Mathematics/Applied Mathematics**

3450:221,2,3	Analytic Geometry-Calculus I, II, III	12
3450:312	Linear Algebra	3

- Approved 300/400-level mathematical sciences electives (at least six credits in 3450 courses which may include 3450:235 Differential Equations.) 9

**Statistics**

3450:221,2	Analytic Geometry-Calculus I, II	8
3450:312	Linear Algebra	3
3470:461,2	Applied Statistics I, II	8
Approved 400-level statistics electives:		6

**Computer Science**

3450:208	Introduction to Discrete Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
or		
3450:215	Concepts of Calculus I	4
3460:209	Introduction to Computer Science	4
3460:210	Data Structures and Algorithms I	4
3460:316	Data Structures and Algorithms II	3
3460:306	Assembly Language Programming	3
Approved 300/400-level computer science electives.		6

**Military Studies: Aerospace Studies**

1500:113	First Year Aerospace Studies*	1.5
1500:114	First Year Aerospace Studies*	1.5
1500:253	Second Year Aerospace Studies*	1.5
1500:254	Second Year Aerospace Studies*	1.5
1500:303	Third Year Aerospace Studies	3
1500:304	Third Year Aerospace Studies	3
1500:453	Fourth Year Aerospace Studies	3
1500:454	Fourth Year Aerospace Studies	3

\* These courses can be taken as "either/or" for core curriculum. Place credit can be given between the two programs.

**Military Studies: Military Science**

		Credits
1600:100	Introduction to Military Science I*	2
1600:101	Introduction to Military Science II*	2
1600:200	Basic Military Leadership	2
1600:201	Small Unit Operations	2
1600:300	Advanced Leadership I	3
1600:301	Advanced Leadership II	3
1600:400	Military Management I	3
1600:401	Military Management II	3

**Modern Languages****French, German, Spanish, or Italian**

A minimum of 18 credits is required.

The student must have at least 12 credits beyond the second year excluding courses which are not counted for credit toward a major.

**Music****Jazz Studies**

7500:210	Jazz Improvisation I	2
7500:211	Jazz Improvisation II	2
7500:212	Music Industry Survey	2
7500:307	Technique of State Band Performance and Direction	2
7500:308	Jazz History and Literature	3
7500:497	Elective in Jazz (see director of Jazz Studies)	2
7510:115	Jazz Ensemble	4
7520:xxx	Applied Jazz Study	8

**Music**

7500:151	Theory I	3
7500:152	Theory II	3
7500:301	Music Appreciation: Music before 1800	2
7500:302	Music Appreciation: Nineteenth and Twentieth Centuries	2
7500:xxx	Music Elective (Selected from any 7500 course at 300 or 400 level)	2
7510:xxx	Music Organization (four semesters in a major conducted ensemble)	4
7520:xxx	Applied Music	8

(This eight-credit requirement must be satisfied in four separate semesters. In order to complete the Minor in Music, the student must successfully jury to the "200" level.)

**Office Administration****General Secretarial - 19 credits**

2540:121	Introduction to Office Procedures	3
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding/Word Processing	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:281	Machine Transcription	3

**Word Processing - 20 credits**

2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding/Word Processing	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:270	Office Software Applications	4
2540:271	Desktop Publishing	3
2540:281	Machine Transcription	3

**Information Records Management - 21 credits**

2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:131	Computerized Document Control	4
2540:151	Intermediate Keyboarding/Word Processing	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:247	Automated Office Systems	4

**Legal Secretarial (Inactive) - 19 credits**

		Credits
2540:129	Information/Records Management	3
2540:151	Intermediate Keyboarding/Word Processing	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:255	Legal Office Procedures I	3
2540:279	Legal Office Procedures II	4
2540:281	Machine Transcription	3

**Philosophy****Requirements**

- A total of 18 semester credits in philosophy including: (a) at least three semester credits at the introductory level (introduction to philosophy, logic or ethics); and (b) at least six semester credits at the 300/400 level.
- Students may select courses related to their major area of study.

**Minors**

Major Area	Philosophy Courses
Arts	Philosophy of Art
Humanities	History of Philosophy
Natural sciences	Philosophy of Science
Computer sciences/mathematics	Philosophy of Mathematics
Law	Philosophy of Law
Business	Business Ethics
Teaching	Philosophy of Education
Theology	Philosophy of Religion
Political science	Political Philosophy
Communication/journalism	Philosophy of Language
Social work	Social Philosophy
Health professions	Biomedical Ethics
Technical writing	Philosophy of Language
Engineering	Philosophy of Technology

- Other minors in philosophy may be designed with the approval of the Department of Philosophy.
- Students should consult with the Department of Philosophy for courses appropriate to their minors.

**Examples**

- Examples of courses available for students majoring in arts, humanities and natural sciences follow:

*Arts (Philosophy of Art)*

3600:120	Ethics
3600:350	Philosophy of Art
3600:211, 312, 13	History of Philosophy
3600:481/581	Philosophy of Language
3600:232	Philosophy of Religion
3600:424/524	Existentialism
3600:426/526	Phenomenology

*Humanities (Philosophy)*

3600:120	Ethics
3600:170, 374	Logic
3600:211, 312, 13	History of Philosophy
3600:350	Philosophy of Art
3600:462/562	Theory of Knowledge
3600:481/581	Philosophy of Language
3600:424/524	Existentialism
3600:426/526	Phenomenology
3600:471/571	Metaphysics

*Natural Sciences (Philosophy of Science)*

3600:120	Ethics
3600:170, 374	Logic
3600:464/564	Philosophy of Science
3600:418/518	Analytic Philosophy
3600:471/571	Metaphysics
3600:426/526	Phenomenology
3600:462/562	Theory of Knowledge
3600:211	History of Ancient Philosophy
3600:462/562	Theory of Knowledge
3600:211	History of Ancient Philosophy

\* These courses can be taken as "either/or" for core curriculum. Place credit can be given between the two programs.

## Physics

- Requirements for a minor in physics include: 3650:291,2 Elementary Classical Physics I, II - eight credits; and, physics electives at the 300/400 level - 10 credits. Note: 3650:261,2, Physics for the Life Sciences, may be substituted for 3650:291,2, in whole or in part.

Recommended physics electives: most students should elect 3650:301. Other highly recommended courses are 3650:320, 322, 323, 340 and 406 (see course descriptions). Finally, 3650:320 provides an important background in optics, useful to engineers, geophysicists and others.

## Political Science

- Each student shall complete at least nine of the required credits in 300/400-level course work in political science.
- A student may select a minor concentration from one of the five following course sequences.

### American Politics

	Credits
3700:100 Government and Politics in the United States	4
Fourteen credits from the following:	
3700:210 State and Local Government and Politics	3
3700:302 American Political Ideas	3
3700:341 The American Congress	3
3700:342 Minority Group Politics	3
3700:350 The American Presidency	3
3700:360 The Judicial Process	3
3700:370 Public Administration: Concepts and Practices	4
3700:380 Urban Politics and Policies	4
3700:381 State Politics	3
3700:382 Intergovernmental Relations	3
3700:395 Internship in Government and Politics	2-9
3700:402 Politics and the Media	3
3700:440 Survey Research Methods	3
3700:470 Campaign Management I	3
3700:472 Campaign Finance	3
3700:475 American Interest Groups	3
3700:476 American Political Parties	3

### Comparative Politics

3700:300 Comparative Politics	4
Fourteen credits from the following:	
3700:304 Modern Political Thought	3
3700:320 Britain and the Commonwealth	3
3700:321 Western European Politics	3
3700:322 Politics of Post-Communist States	3
3700:323 Politics of China and Japan	3
3700:325 Comparative Public Policy	3
3700:326 Politics of Developing Nations	3
3700:327 African Politics	3
3700:330 Canadian Politics	3
3700:405 Politics in the Middle East	3
3700:420 Issues and Approaches in Comparative Politics	3
3700:425 Latin American Politics	3
3700:471 Campaign Management II	3

### International Politics

3700:100 Government and Politics in the United States	4
3700:310 International Politics and Institutions	4
3700:415 Comparative Foreign Policy	3

Seven credits from the following:

3700:220 American Foreign Policy	3
3700:300 Comparative Politics	4
3700:304 Modern Political Thought	3
3700:312 The Politics of International Trade and Money	3
3700:320 Britain and the Commonwealth	3
3700:321 Western European Politics	3
3700:322 Politics of Post-Communist States	3
3700:323 Politics of China and Japan	3
3700:325 Comparative Public Policy	3
3700:326 Politics of Developing Nations	3
3700:327 African Politics	3
3700:330 Canadian Politics	3
3700:405 Politics in the Middle East	3
3700:410 International Defense Policy	3
3700:411 Theories of International Political Economy	3
3700:425 Latin American Politics	3

## Public Policy Analysis

		Credits
3700:100 Government and Politics in the United States		4
3700:201 Introduction to Political Research		3
3700:441 The Policy Process		3
3700:442 Methods of Policy Analysis		3
3700:480 Policy Problems		3

Two credits from the following:

3700:301 Advanced Political Research	3
3700:325 Comparative Public Policy	3
3700:370 Public Administration: Concepts and Practices	4
3700:382 Intergovernmental Relations	3
3700:402 Politics and the Media	3
3700:440 Survey Research Methods	3

## Pre-Law

3700:100 Government and Politics in the United States	4
3700:360 The Judicial Process	3
3700:461 The Supreme Court and Constitutional Law	3

Seven credits from the following:

3700:210 State and Local Government and Politics	3
3700:302 American Political Ideas	3
3700:341 The American Congress	3
3700:361 Politics of the Criminal Justice System	3
3700:381 State Politics	3
3700:392 Special Topic: Criminal Law and Procedures	1-3
3700:395 Internship in Government and Politics	2-9
3700:462 The Supreme Court and Civil Liberties	3

## Psychology

- A total of 19 credits in Psychology with eight credits of 300/400-level coursework.

- Required for all students:

3750:100 Introduction to Psychology	3
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- At least one course from these 100-200-level courses:

3750:110 Quantitative Method in Psychology	4
3750:220 Introduction to Experimental Psychology	4
3750:230 Developmental Psychology	4
3750:240 Industrial/Organizational Psychology	4

- At least one course from these 300-level courses:

3750:320 Biopsychology	4
3750:335 Dynamics of Personality	4
3750:340 Social Psychology	4
3750:345 Cognitive Processes	4

- Courses from the following list which relate to student's area of interest:

3750:400 Personality	4
3750:410 Psychological Tests and Measurements	4
3750:420 Abnormal Psychology	4
3750:430 Psychological Disorders of Children	4
3750:435 Cross-cultural Psychology	4
3750:441 Clinical and Counseling Psychology I	4
3750:443 Human Resource Management	4
3750:444 Organizational Theory	4
3750:445 Psychology of Small Group Behavior	4
3750:450 Cognitive Development	4
3750:460 History of Psychology	3
3750:475 Psychology of Adulthood and Aging	4
3750:485 Applied Developmental Psychology	4

## Sales Management

- Required: Complete all courses - 12 credits

6500:301 Management: Principles and Concepts	3
6600:300 Marketing Principles	3
6600:375 Professional Selling	3
6600:480 Sales Management	3

- Electives: Complete two (2) courses - 6 credits

6500:302 Introduction to Organizational Behavior	3
6500:341 Human Resource Management	3
6600:460 Marketing Research	3
6600:470 Business to Business Marketing	3
7600:235 Interpersonal Communication	3

## Sociology

- Nineteen total credits are required.
- Required for all students:

	<i>Credits</i>
3850:100 Introduction to Sociology	4

- A minimum of 15 additional credits of sociology courses at the 300/400 level are required. Students may wish to select courses which relate to a particular interest area (e.g., family, health and illness, sex roles, urban life, gerontology). These areas are outlined in materials available in the Department of Sociology. Students with such interest should see an adviser in the Department of Sociology for assistance in course selection for the minor program.

## Theatre Arts

(Requires a minimum of 24 credits.)

7800:100 Experiencing Theatre	3
7800:265 Basic Stagecraft I	3

Twelve additional credits are required: three credits from each of the following areas, three credits of theatre electives, plus three credits of practical theatre experience.

## Design/Technology

7800:106 Introduction to Stage Design	3
7800:107 Introduction to Stage Costume Techniques	3
7800:255 Stage Lighting	3

## Acting/Directing

7800:172 Acting I	3
7800:271 Directing I	3

## Musical Theatre

7800:421 Music Theatre Production	3
7800:475 Acting for the Musical Theatre	3
History/Dramatic Literature	
7800:370 The American Theatre	3
7800:467 Contemporary Theatre Styles	3

## Theatre Production/Performance

7810:xxx Production/Performance	3
Theatre Electives	3

## Transportation

- Core:

		<i>Credits</i>
2560:110	Principles of Transportation	3
2560:118	Transportation Rate Systems	3
2580:221	Traffic and Distribution Management	3
2560:224	Transportation Regulation	3

- Six credits from the following:

2560:115	Motor Transportation	3
2560:116	Air Transportation	2
2560:117	Water Transportation	2
2560:222	Microcomputer Applications in Transportation	3
2560:227	Transportation of Hazard Materials and Wastes	2

## Airline/Travel Industry Option

- Students wishing to obtain a minor in this option must complete the following courses with a 2.0 grade point average.

- Core:

2560:111	Principles of Transportation	3
2560:116	Air Transportation	2
2560:228	Introduction to Travel	2
2560:229	Passenger Ticketing	2
2560:230	Tour Planning and Packaging	2

- In addition to the above core, a minimum of seven hours must be completed from the following:

2540:140	Keyboarding for Non-majors	2
2560:118	Transportation Rate Systems	3
2560:221	Traffic and Distribution Management	3
2560:231	Computerized Reservations I	2
2560:232	Computerized Reservations II	2



# 6

Inter-  
disciplinary  
and  
certificate  
programs

# Interdisciplinary and Certificate Programs of Study

## OVERVIEW

To add to the dimensions of the traditional disciplines, the University has established interdisciplinary and interdepartmental programs of study. In addition to a major, the student may elect to pursue one of these programs.

Interdisciplinary Studies programs feature courses which integrate and analyze issues and concepts from more than one field. The goal of this type of study is to place knowledge into a greater perspective than would be possible through any one traditional field. This is accomplished by taking courses from a variety of departments as well as courses which may be team taught. Interdisciplinary Studies and certificate programs will include coursework designated as 1800:

Upon completion of any of these programs, a statement will be placed on the student's permanent record indicating the area of concentration. The certificate indicating the area of concentration will be awarded when the student completes requirements for a degree unless the program specifies that it is free standing and does not require participation in a degree program.

## AFRICAN-AMERICAN STUDIES

For information, contact the Interdisciplinary Office, located in Leigh Hall 201, (216) 972-7008.

### Requirements

To satisfy the requirements for the certificate, a student must complete at least 11 semester credits and four courses with a minimum 2.00 GPA from the list of acceptable courses or other courses identified by the director. The requirements are as follows:

		<i>Credits</i>
3002:401	General Seminar in African-American Studies (A research paper in African-American Studies will be written in this course.)	3
3400:260	African-American People of the United States	3
<b>Acceptable Courses</b>		
3400:390	World Civilizations: Africa	2
2040:254	The Black American	2
3002:301	The Civil Rights Movement in America 1945-1974	3
3002:401	General Seminar in African-American Studies	3
3002:420	Special Topics in African-American Studies	1-3
3250:486	Ghetto Economic Development	3
3300:350	Black American Literature	3
3300:389	United States Dialects: Black and White	3
3300:389	Special Topics: African-American Novel	3
3300:389	Special Topics: African-American Drama	3
3300:689	Special Topics: Seminar Wright/Ellison/Baldwin	3
3350:363	Africa South of the Sahara	3
3400:260	African-American People of the United States	3
3400:468	African-American Social and Intellectual History	3
3500:350	Special Topics: African Experiences in Latin America	3
3700:327	African Politics	3
3850:421	Racial and Cultural Intergroup Relations	3
7750:270	Poverty in the United States	3
7750:276	Introduction to Social Welfare	4
7750:410	Minority Issues in Social Work	3
7750:455	Black Family Issues	3

### Research Paper

The research paper will: be written under the direction of a faculty member most suitable to the area of concern of the student's research interest; be one semester in duration; and be approved by that faculty member. The director of African-American Studies, in consultation with the faculty member, will approve the topic for the research paper.

A student undertaking the African-American Studies Certificate Program must have prior consultation with the director of African-American Studies.

## AGING SERVICES

John Mumper, J.D., *Coordinator*

This program is intended for individuals who wish to enhance their knowledge of the aging process, study issues pertinent to the elderly, and develop skills useful in working with senior citizens. This program is not limited to community services majors.

This certificate program is generally designed for individuals in one of the following categories:

- The person with no degree but who is contemplating working with senior citizens.
- The person with a degree who has not had specialized training in the field of gerontology, but who would like to work in this field.
- The person employed in this field who would like to upgrade his/her knowledge and skills.
- Persons interested in enhancing the quality of their post-retirement years or those of family and friends.

Persons interested in this program should consult with the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College. This certificate may be earned independent of earning a degree.

### Requirements

		<i>Credits</i>
1850:450	Interdisciplinary Seminar in Gerontology	2
1850:486	Retirement Specialist	2
2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:244	Death and Dying	2
2260:150	Introduction to Gerontological Services	3
2260:278	Techniques of Community Work	4
2260:279	Technical Experience: Community and Social Services	5
7400:390	Family Relationships in Middle and Later Years	3

## ALCOHOL SERVICES AIDE

John Mumper, J.D., *Coordinator*

This program is intended for individuals who wish to enhance their knowledge of alcohol use and abuse and the treatment of alcoholism. The program is not limited to community services majors. This certificate is generally designed for individuals in one of the following categories:

- The person with no degree but who is contemplating working in the field of alcoholism treatment.
- The person with a degree who has not had specialized training, but who would like to be employed in the field of alcoholism treatment.
- The person employed in this field who would like to upgrade his/her knowledge and skills.

Persons interested in this program should consult with the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College.

### Requirements

		<i>Credits</i>
2020:121	English	4
2020:222	Technical Report Writing	3
2260:260	Alcohol Use and Abuse	3
2260:261	Alcoholism Treatment	3
2260:262	Basic Helping Skills in Alcohol Problems	4
2260:263	Group Principles in Alcoholism	4
2260:278	Techniques of Community Work	4
2260:279	Technical Experience: Community and Social Services	5

## APPLIED POLITICS

John C. Green, Ph.D., *Director*

The Ray C. Bliss Institute and the Department of Political Science have combined to offer a Certificate Program in Applied Politics for undergraduate students.

The Certificate Program in Applied Politics offers course work in the history, organization and management of campaigns intended to influence the outcome of political decisions. Working from a set of core courses, students are allowed to concentrate in the area of applied politics of greatest interest—campaigns, communications, lobbying, political parties, etc. Believing that democracy is best served by having active and informed citizens, the certificate is designed for all students, no matter what their degree program, as long as they have a deep interest in practical politics.

### Requirements

Persons are eligible for admission to the Certificate Program in Applied Politics if they have been admitted to study as special, non-degree or full-time students in any department of the University. Student shall seek admission to this program by filing an application with the Bliss Institute. The student shall schedule courses with the assistance of an advisor at the earliest possible time.

#### Core Courses

		Credits
3700:470	Campaign Management I	3
3700:471	Campaign Management II	3
3700:395	Internship in Government and Politics	3

#### Electives

In addition to the core courses, students must complete 9 elective credits. Three credits must be from the following:

3700:402	Politics and the Media	3
3700:440	Survey Research Methods	3
3700:472	Campaign Finance	3
3700:473	Voter Contact and Elections	3
3700:474	Public Opinion, Behavior and Electoral Politics	3
3700:475	American Interest Groups	3
3700:476	American Political Parties	3
7600:450	ST:Communication in Political Campaigns	3

Completed electives must also include an additional 6 credits from above or from approved courses in Political Science, Communication, or other departments. Students must maintain at least a "B" (3.0) average in their coursework for the certificate.

#### Certificate

Political Science majors will, upon completion of the program, be awarded a B.A. or B.S. degree in Political Science with a Certificate in Applied Politics. Majors in other disciplines will have the Certificate noted on their permanent record.

## CANADIAN STUDIES

Mary K. Kirtz, Ph.D., *Director*

### Requirements

The student in the Canadian Studies Certificate Program will complete 15 hours of coursework offered by the designated departments in the Buchtel College of Arts and Sciences. An independent study or a course with Canadian content not on the following list may be substituted for one of the electives with the approval of the Canadian Studies Committee. Persons admitted to study as special, non-degree or full-time students are eligible to apply for the certificate.

#### Required Course:

3005:300	Introduction to Canadian Studies	3
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#### Electives (4 must be taken):

3300:382	Contemporary Canadian Literature	3
3300:489	Seminar in English: Traditional American Indian Tales	3
3350:350	Geography of Canada & U.S.	3
3400:352	The West in the Development of the United States	3
3400:366	History of American Transportation	3
3700:330	Canadian Politics	3
3850:389	Comparative Sociology	3
3500:315	French-Canadian Literature	3
3400:414	History of Canada	3

## CARTOGRAPHIC SPECIALIZATION

Charles Monroe, Ph.D., *Department Chair*

### Requirements

This program of professional and scientific education is intended to enhance cartographic training in data handling, analysis and graphic communication of simple and complex geographic data and information. The program is not limited to geography majors and is designed to introduce automated and traditional cartographic skills to the student in a wide spectrum of disciplines. These training opportunities provide for specialized study in the rapidly changing and significant area of cartography as a method of graphic communication. The program is flexible to meet the varied backgrounds and interests of the individual student.

In addition to cartographic courses in the Department of Geography and Planning, many useful courses are found in other departments. The program is designed to permit the student to combine interesting and useful elements of art, science and technology. This certificate may be earned independent of a degree program.

Cartography has a very long and rich history and, while it is eminently practical, has a strong component of theory. For this reason, a student may elect to take cartographic courses simply because they are focused on an interesting and exciting liberal arts subject. Other students choose cartography courses with the thought of increasing their potential of finding a position subsequent to graduation. There is a well-documented need for persons trained in cartographic awareness and skill in business, industry and government, as well as the academic community.

#### Core

Complete five of the following basic courses:

		Credits
3350:340	Cartography	3
3350:341	Maps and Map Reading	3
3350:405	Geographic Information Systems	3
3350:442	Thematic Cartography	3
3350:444	Map Compilation and Reproduction	3
3350:447	Introduction to Remote Sensing	3
3350:448	Automated Computer Mapping	3
3350:449	Advanced Remote Sensing	3

#### Electives

Each student must complete at least seven credits distributed between professional, technical and research offerings in departments other than the Department of Geography and Planning. These courses will be selected in consultation with the program's director. Similar courses completed at other universities, up to five years prior to admission to candidacy, may be approved by the director.

The electives help develop a diverse cartographic skill and perspective which is significant and useful for persons working with data systems management, urban planning and environmental impact studies. To be truly effective and comprehensive in a career, the student must know a variety of professional and technical approaches to cope with social, economic, political, geographical, physical design and governmental problems. Selecting courses that duplicate or continue topical interests already well established in a particular student's background will be discouraged.

#### Internship

Internship in an agency, firm or office engaged in related graphic and cartographic work; or an internship in the University's Laboratory for Cartographic and Spatial Analysis.

#### Final Examination and Defense of Cartographic Works

After the completion of coursework each student undergoes an oral examination covering samples of the student's cartography, conducted by two members of the department and one from the elective area. Questions cover the specific projects and topics covered in the coursework completed specifically for the program. One week before the scheduled examination, the student submits samples of cartographic work.

The works must be acceptable to the examination committee and reduced photographic copies will be kept for permanent record in the laboratory's file. After passing the oral examination and the acceptance of the samples of cartography, the student is considered to have completed the program.

A minimum grade of "C" is required in all elective courses taken as part of the certificate program. In the five core courses, an average grade of "B" is required.

## CHEMICAL DEPENDENCY

Jophn Mumper, J.D., *Coordinator*

This program is intended for individuals who wish to enhance their knowledge of chemical dependency treatment. The program is not limited to community service majors. This certificate, which requires 42 credits of course work, is designed for individuals in one of the following categories.

- The person with no degree but who is interested in working in the field of chemical dependency.
- The person with a degree who has not had specialized training, but who would like to have specialized training.
- The person employed in this field who would like to upgrade his/her knowledge and skills.

Persons interested in this program should consult the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College. This certificate may be earned independent of earning a degree.

### Requirements

		Credits
2260:100	Introduction to Community Services	3
2260:240	Chemical Dependency	3
2260:241	Chemical Dependency II	3
2260:260	Alcohol Use and Abuse	3
2260:261	Alcohol Treatment	3
2260:262	Basic Helping Skills in Alcohol Problems	4
2260:263	Group Principles in Alcoholism	4
2260:278	Techniques of Community Work	4
2260:279	Technical Experience in Community and Social Services	5
2260:286	Counselor Assistant Internship	4
—	Electives in Chemical Dependency	6

## CHEMICAL DEPENDENCY EDUCATION AND PREVENTION

2260:210	Chemical Dependency Education and Prevention I	4
2260:211	Chemical Dependency Education and Prevention II	4
2260:212	Chemical Dependency Education and Prevention Internship I	5
2260:213	Chemical Dependency Education and Prevention Internship II	4
2260:240	Chemical Dependency	3
2260:260	Alcohol Use and Abuse	3
2260:264	Children of Alcoholics	3
2260:—	Electives in Chemical Dependency	6

## CHILD CARE WORKER

Renee S. Pipitone, *Coordinator*

### Requirements\*

The establishment of this certificate program provides basic vocational training for child-care practitioners. The course of study is a means of meeting the short range goals of students interested in acquiring skills for immediate job placement. This certificate may be attained independent of earning a degree.

2040:240	Human Relations	3
2200:245	Infant/Toddler Day-Care Programs	3
2200:250	Observing and Recording Children's Behavior	3
5200:310	Introduction to Early Childhood Education	3
5200:315	Issues and Trends in Early Childhood Education	3
5200:360	Teaching in the Nursery Center	2
5200:370	Nursery Center Laboratory	2
7400:265	Child Development	3
7400:270	Theory and Guidance of Play	3
7400:280	Creative Activities for Pre Kindergarten Children	4

\* The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

## COMMERCIAL PHOTOGRAPHY (Inactive)

Neil Sapienza, M.S., *Coordinator*

This certificate program will enhance students' knowledge of the Commercial Photography field and its relationship with the design and advertising industries. This program is designed for individuals who are presently working in a related field, or who are pursuing a two year degree in a related field.

### Required Courses:

		Credits
2240:110	Multi-Image Production	3
2240:122	Introduction to Commercial Photography	3
2240:210	Portrait/Fashion Photography	3
2240:224	Illustration/Advertising Photography	3
2240:250	Advanced Commercial Photography	3
7100:275	Introduction to Photography	3

## COMPUTER PHYSICS

E. Von Meerwall, Ph.D., *Director*

### Requirements

To qualify for the certificate program, a student must be in good academic standing in the major department and must submit a written request for admission to the director of the program. This course of study adds a component of both physics and computer science to a major in a traditional area of science. The physics courses, beyond Elementary Classical Physics, emphasize computer applications, including interfacing and data acquisition, data analysis and use of computers to solve physical problems.

Physics		
3650:291,2	Elementary Classical Physics I, II	8
3650:350	Computational Physics	3
3650:468	Digital Data Acquisition	3
Mathematics		
3450:221,2	Analytic Geometry-Calculus I, II	8
Computer Science		
3460:206	Introduction to C Programming	3
3460:209	Computer Programming I	3
3460:210	Computer Programming II	3

The certificate program has been structured to be accessible to most students working toward an undergraduate degree in a traditional area of science. The certificate may be combined with a minor in physics for students who wish to obtain a background in physics which emphasizes applications and uses of computers to collect and analyze data and to solve physical problems.

## COMPUTER SCIENCE

David C. Buchthal, Ph.D., *Department Chair*

### Requirements

#### Entrance

To qualify for the Computer Science Certificate Program, a student must be in good academic standing in the major department, must have completed four credits of mathematics in the Department of Mathematical Sciences and must submit to the department head a written request for admission to the program. The request will outline the student's reasons and goals for enrolling in the program. The area of concentration adds a further dimension of both mathematics and computer science to the student's major in one of the traditional academic disciplines. A minimum grade-point average of 2.00 in the certificate is required. The Certificate in Computer Science will only be granted upon completion of a degree program or if a degree has already been earned.

#### Courses

3450:208	Discrete Mathematics	4
3450:215	Concepts of Calculus I	4
	or	
3450:221	Analytic Geometry-Calculus I	4

3460:209	Introduction to Computer Science	Credits	4
3460:210	Data Structures and Algorithms I		4
3460:306	Assembly Language Programming		3
3460:316	Data Structures and Algorithms II		3
-----	Approved 300/400-Level Computer Science Electives		6

## COMPUTER SOFTWARE FOR BUSINESS

### Requirements

The Computer Software for Business certificate provides the opportunity for those with little or no prior computer experience to become proficient in the use of popular microcomputer software and understand the fundamental concepts of software development. This certificate may be obtained independent of a degree.

2440:120	Computer and Software Fundamentals	2
2440:121	Introduction to Programming Logic	2
2440:125	Lotus 1-2-3	2
	or	
2440:243	Information Center Practicum	3
2440:133	Structured COBOL Programming	3
	or	
2440:130	BASIC Programming for Business	3
2440:151	PC DOS Fundamentals	1
2440:245	Introduction to dBase III+/IV	3
	or	
2440:267	4GL for Micros:dBase III+	3

## CRIMINAL JUSTICE TECHNOLOGY

Charles F. Williams, B.A., *Coordinator*

### Requirements\*

The program specified is designed to provide background, proficiency and updating in the criminal justice area. In the immediate geographic area there are approximately 2,200 police officers and support personnel in police departments. While many of these police officers have completed a degree, many more would benefit by this type of approach. The designed program would provide a measure of recognition for those students enrolled and completing the program. The program would be continually monitored and has been included in many localities as an incentive for promotion, pay increases and lateral movement within the police agency. This certificate may be obtained independent of a degree.

2200:100	Introduction to Criminal Justice	3
2220:102	Criminal Law for Police	3
2220:104	Evidence and Criminal Legal Process	3
2220:240	Dynamics of Vice Crime and Substance Abuse	3
2220:250	Criminal Case Management	6
3850:100	Introduction to Sociology	4

## CRIMINAL JUSTICE/ SECURITY EMPHASIS

Charles F. Williams, B.A., *Coordinator*

### Requirements\*

The program specified is designed as an integrated approach to provide proficiency and updating in the security field. The security field is one of the fastest growing areas of business today. There are approximately 750,000 individuals in the United States dealing with security problems. In the state of Ohio, there are approximately 70,000 and in the local area, 2,500 security personnel. The field is upgrading very rapidly by accepted state training and there is a move now for more education to be provided at the college level.

This certificate may be obtained independent of a degree.

2220:101	Introduction to Security	Credits	4
2220:290	Special Topics in Criminal Justice		3
2230:204	Fire Hazards Recognition		3
2230:250	Hazardous Materials		4
2250:260	Administration and Supervision for Public Service		3
2880:141	Safety Procedures		3

## DIGITAL ELECTRONICS AND MICROPROCESSORS

David J. Robinson, M.S.E., *Coordinator*

### Requirements

The certificate program in Digital Electronics and Microprocessors is designed for students who desire a formal, structured program in a specific area in the field of electronics, but, because of time or work constraints, are unable to pursue a complete associate or baccalaureate degree program.

The following 26 semester hours are required:

2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Mathematics IV	3
2860:120	DC Circuits	4
2860:122	AC Circuits	3
2860:123	Electronic Devices	3
2860:136	Introduction to Digital Concepts	1
2860:237	Digital Circuits	4
2860:238	Microprocessor Fundamentals	4

All courses taken may be applied toward the Associate Degree in Electronic Engineering Technology.

## DRAFTING AND COMPUTER DRAFTING TECHNOLOGY

Paul R. John, M.S.T.E., *Coordinator*

### Requirements

The certificate program in Drafting and Computer Drafting Technology is intended for individuals who wish to enhance or update their drafting skills. The program has been designed so that an individual can emphasize a specific area of draft ing. A minimum of 18 credits is required. All courses taken may be applied toward an associate degree in Drafting and Computer Drafting Technology. This certificate may be earned independent of any degree program.

The following 9 semester hours are required:

2940:121	Technical Drawing I	3
2940:122	Technical Drawing II	3
2940:210	Computer Drafting	3

\* The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

\* The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

A minimum of 9 semester hours selected from the following:

		Credits
2870:311	Computer Aided Drafting II	2
2940:170	Surveying Drafting	3
2940:200	Advanced Drafting	3
2940:230	Mechanical Systems Drafting	3
2940:240	Electrical & Electronic Drafting	3
2940:250	Architectural Drafting	3
2980:250	Structural Drafting	2
3350:340	Cartography	3

All courses taken may be applied toward the Associate Degree in Drafting and Computer Drafting Technology.

## ENVIRONMENTAL STUDIES

Annabelle M. Foos, Ph.D., *Interim Director*

### Requirements

To qualify for the certificate program, students must be in good academic standing with the major department and request admission to the program. The request will outline the student's reasons and goals for enrolling in the program.

Students will take a minimum of six courses from a list approved by the committee on environmental studies. Two of these courses will be:

3010:201	Man and the Environment	2
3010:401	Seminar in Environmental Studies	2

Students will select courses from areas other than their major.

Students' plans of study for this certificate will be developed in consultation with the director of the Center for Environmental Studies.

### Courses

3010:201	Society and the Environment	2
3010:401	Seminar in Environmental Studies	2
3010:490	Workshop in Environmental Studies	1-4
3010:602	Evaluation of Environmental Data	3
3010:661	Graduate Seminar in Environmental Studies	3
3100:105	Introduction to Ecology	2
3100:217	General Ecology	3
3100:422	Conservation of Biological Resources	3
3100:424	Freshwater Ecology	3
3100:426	Applied Aquatic Ecology	3
3250:385	Economics: Natural Resources and Environment	3
3350:314	Climatology	3
3350:335	Recreational Resource Planning	3
3350:436	Urban Land Use Analysis	3
3350:447	Introduction to Remote Sensing	3
3350:495	Soil and Water Field Studies	3
3370:200	Environmental Geology	3
3370:474	Ground Water Hydrology	3
3370:678	Urban Geology	3
3400:434	American Environmental History	3
3850:321	Population	3
3850:425	Sociology of Human Life	3
4100:201	Energy and Environment	2
4100:202	Atmosphere Pollution	2
4200:463	Pollution Control	3
4300:428	Hazardous and Solid Waste	3

## FIRE PROTECTION TECHNOLOGY

David H. Hoover, Ph.D., *Coordinator*

### Requirements\*

Although fire continues to be a growing problem in the United States with more than 2,300,000 fires annually causing 6,000 fatalities and 30,000 injuries, many municipalities are financially unable to provide a full-time fire department and instead must depend upon the dedicated volunteer firefighter. As this trend continues, the need for the well-educated volunteers will be even more critical as these citizens assume responsible officer positions.

The Fire Protection Technology certificate will assist the student in acquiring the skills and knowledge to function effectively as a volunteer/paid on-call firefighter or officer in addition to receiving a certificate of completion and accomplishment.

		Credits
2230:100	Introduction to Fire Protection	3
2230:102	Fire Safety in Building Design and Construction	3
2230:104	Fire Investigation Methods	4
2230:202	Fire Suppression and Emergency Response Methods	4
2230:204	Fire Hazards Recognition	3
2230:205	Fire Detection and Suppression Systems I	3
2230:250	Hazardous Materials	4

## GERONTOLOGY

Harvey Sterns, Ph.D., *Director*

Isadore Newman, Ph.D., *Associate Director*

Raymond E. Sanders, Ph.D., *Associate Director of Research*

Evelyn Sutton, M.A., *Program Coordinator,*

*Gerontology Certificate Program*

Jerome Kaplan, Ph.D., *Program Coordinator, Nursing Home Administrator Program*

### Requirements

This certificate program is a special course of study in gerontology that complements undergraduate degree programs in various departments and colleges throughout the University. Individuals who already hold an undergraduate degree may also pursue the certificate. The program represents a concentration involving current knowledge and research in gerontology. It adds another dimension to the knowledge and skills a student is able to offer in the many professions that are becoming specialized in research and service to adults and older adults. This course of study coordinates multidisciplinary training of personnel in adult development and aging and helps to meet the critical shortage of trained individuals in the field of gerontology.

The undergraduate curriculum committee of the Institute for Life-Span Development and Gerontology will oversee this certificate program and certify through the director of the institute that all requirements for the certificate have been completed.

A sequence of study is available in Nursing Home Administration through the institute. The undergraduate certificate is included in the Ohio Board of Examiners of Nursing Home Administrators approved course of study in Nursing Home Administration which combines a Bachelor of Science in Industrial Management (Personnel Option) with a Certificate in Gerontology.

B.S./M.D. students may complete the Practicum/Internship and electives from courses available from the institute or the Office of Geriatric Medicine and Gerontology, NEUCOM.

### Admission

To participate in the program, a student must:

- Obtain admittance to The University of Akron as an undergraduate or postbaccalaureate student.
- Submit an application to the program countersigned by the student's major academic adviser.

\* This awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

- Participate in an interview with a designated faculty member of the Institute for Life-Span Development and Gerontology.
- Consult with the Director or a designated faculty member to formulate a program of study.
- Receive written notification of admission from the Director of the Institute for Life-Span Development and Gerontology.

## Program

Minimum: 20 credits.

### Core

		Credits
3006:450	Interdisciplinary Seminar in Gerontology	2
3006:495	Practicum/Internship (within Institute or in individual departments)	3
3100:392	Biology of Aging	3
	Prerequisite: 3110:112 or 265 or 206 or 207 or equivalent	
3750:475	Psychology of Adulthood and Aging	4
	Prerequisite: 3750:100 or permission	
3850:343	The Sociology of Aging	3
	Prerequisite: 3850:100 or permission	

### Electives (must be outside of student's major degree department)

3006:486	Retirement Specialist	2
3006:490	Workshop/Women: Middle and Later Years	2
3006:490	Workshop/Aging: Process and Intervention	2
3006:485-001	Special Topics/Long Term Care: Case Management/Patient Services	3
3006:485-003	Special Topics/Long Term Care: Health and Nutrition	3
2040:244	Death and Dying	2
3700:480	Policy Problems: Aging*	3
3850:365	Special Topics in Sociology: Death and Dying	3
3850:444	Social Issues in Aging	3
5400:440	Life-Span and Community Education	2
6500:480	Introduction to Health Care Management	3
7400:390	Family Relationships in Middle and Later Years	3
7700:110	Introduction to Disorders of Communication	3
7750:450	Social Needs and Services for Later Adulthood and Aging	3

For students in course sequence for Nursing Home Administration, the following courses are required:

3006:485	ST: Long Term Care Administration	3
3006:485	ST: Long Term Care Case Management and Patient Services	3
3006:485	ST: Long Term Care Health and Nutrition	3
3006:485	ST: Long Term Care Administrator-in-Training Experience	3

Many courses have prerequisites which must be met.

## HOME-BASED INTERVENTION

Helen Cleminshaw, Ph.D., *Coordinator*

This certificate program is a special course of study along with the undergraduate degree programs in various departments and colleges throughout the University. Undergraduate students will earn the certificate upon their graduation in their degree program. Individuals who already hold an undergraduate degree may pursue the certificate in the postbaccalaureate program. The program represents a concentration in current theoretical knowledge and practice in home-based intervention. It adds another dimension to the knowledge and skills a student is able to offer in the many professions that relate to services to at-risk children and their families. This course of study coordinates multidisciplinary training of personnel in home-based intervention and helps to meet the need for trained professionals in home-based intervention.

The undergraduate curriculum committee of the Center for Family Studies will oversee the certificate program and certify through the certificate program director that all requirements for the certificate have been completed.

### Admission

To participate in the program the student should:

- Be formally admitted to The University of Akron as an undergraduate or post-baccalaureate student.

- Make written application to the program countersigned by the student's major adviser (if applicable).
- Have an interview with the director of the certificate program in Home-based Intervention.
- Consult with the director to formulate a program of study.
- Receive written notification from the director of admission to the program.

## Program

All students enrolled in the home-based certificate program will enroll in the core courses in Home-based Intervention. Students will complete 18 credits in core and elective course work.

### Core (9-11 credits)

		Credits
1820:403	Home-based Intervention Theory	3
1820:404	Home-based Intervention Techniques and Practice	3
1820:405	Home-based Intervention Internship	3

### Eligibility courses (9 credits)

Students must have completed at least nine undergraduate credits in theoretical frameworks from their discipline or in related areas as follows:

Students will select at least one course from each area or document the same or an equivalent course from transcripts.

#### Psychology

3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3750:335	Dynamics of Personality	4

#### Home Economics and Family Ecology

7400:265	Child Development	3
7400:360	Parent-Child Relations	3
7400:362	Family Life Management	3

#### Sociology/Social Work

7750:276	Introduction to Social Welfare	4
7750:401	Introduction to Social Work Practice I	3
7750:455	The Black Family	3
3850:100	Introduction to Sociology	4
3850:340	The Family	3

### Electives (9 credits)

Select one course from three different disciplines. (Must be outside student's major degree area.)

#### Home Economics and Family Ecology

7400:401	Family Life Patterns in the Economically Deprived Home	2
7400:404	Adolescence in the Family Context	3
7400:406	Family Resource Management	3
7400:440	Family Crisis	3
7400:442	Human Sexuality	3
7400:492	Parenting Skills	3

#### Sociology

3850:410	Social Structures and Personality	3
3850:412	Socialization: Child to Adult	3
3850:430	Juvenile Delinquency	3
3850:450	Sociology of Mental Illness	3

#### Psychology

3750:400	Personality	4
3750:420	Abnormal Psychology	4
3750:430	Psychological Disorders of Children	4

#### Social Work

7750:410	Minority Issues in Social Work Practice	3
7750:451	Social Work and Child Welfare3	
7750:452	Social Work and Mental Health3	
7750:454	Social Work in Juvenile Justice3	

#### Multicultural Education

5630:482	Characteristics of Culturally Different Youth	3
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#### Special Education

5610:440	Developmental Characteristics of Exceptional Individuals	3
5610:446	Developmental Characteristics of Behaviorally Disordered Individuals	3
5610:459	Communication and Consultation with Parents and Professional	3
5610:468	Advanced Behavioral Management	3

\* Offered every other year.

## HOSPITALITY MANAGEMENT

### Program

The Hospitality Management certificates in Culinary Arts, Hotel/Motel Management, and Restaurant Management are intended to meet the need of persons who are active or wish to become active in the hospitality industry and are seeking to acquire specific knowledge which will be of immediate use in their careers. The certificates are also of use to non-hospitality majors who wish to broaden their skills and employability by completing the required 32 credits of class and laboratory credits.

**NOTE:** The award of these certificates are not contingent upon completion of a degree program. All courses taken may be applied toward an associate degree in hospitality management.

### Culinary Arts

		Credits
2280:120	Safety and Sanitation	3
2280:121,2	Fundamentals of Food Preparation I, II	8
2280:123	Meat Technology	2
2280:160	Wine and Beverage Service	3
2280:232	Dining Room Service and Training	2
2280:233	Restaurant Operation and Management	4
2280:240	Systems Management and Personnel	3
2280:261	Baking and Classical Desserts	3
2280:262	Classical Cuisine	3
2280:263	International Foods	2

### Hotel/Motel Option (Inactive)

2280:120	Safety and Sanitation	3
2280:135	Menu Planning and Purchasing	3
2280:150	Front Office Procedures	3
2280:152	Maintenance and Engineering for Hotels and Motels	3
2230:153	Principles of Fire Protection and Life Safety	3
2280:232	Dining Room Service and Training	2
2280:238	Cost Control Procedures	3
2280:240	Systems Management and Personnel	3
2280:254	Hotel/Motel Housing Management	3
2280:255	Hotel/Motel Sales Promotion	3
2280:256	Hospitality Law	3

### Restaurant Management Option

2280:120	Safety and Sanitation	3
2280:121	Fundamentals of Food Preparation I	4
2280:122	Fundamentals of Food Preparation II	4
2280:123	Meat Technology	2
2280:135	Menu Planning and Purchasing	3
2280:232	Dining Room Service and Training	2
2280:233	Restaurant Operation and Management	4
2280:237	Internship	1
2280:238	Cost Control Procedures	3
2280:240	Systems Management and Personnel	3
2280:243	Food Equipment and Plant Operations	3

## INTERIOR DESIGN

Carolyn Albanese, M.S., *Associate Professor*

### Requirements

The certificate of interior design is an interdisciplinary program between the School of Home Economics and Family Ecology and the School of Art which qualifies the student as an interior design assistant. The interior design assistant is qualified by education and experience to assist clients with the selection and arrangement of interior furnishings, materials and space planning; perform the basic skills necessary to implement a design, including taking measurements, providing cost estimates, preparing drawings and business documents, and consulting with workrooms, installers, and other support specialists; and assist the professional interior designer. The certificate program is open to undergraduates in other disciplines as well as persons with baccalaureate degrees from The University of Akron or other accredited institutions. The certificate must be issued simultaneously with a baccalaureate degree or to those already holding a baccalaureate degree. Students interested in this program must meet with an academic

advisor in order to sign a contract of study and obtain information on sequencing of required courses.

The following requirements must be met:

		Credits
7100:131	Drawing I	3
7100:244	Two-Dimensional Design	3
7100:491	Architectural Presentations I	3
7100:492	Architectural Presentations II	3
7400:121	Textiles	3
7400:158	Introduction to Interior Design	3
7400:335	Specifications for Interiors II	3
7400:336	Principles and Practices of Design	3
7400:418	History of Interior Design I	4
7400:419	History of Interior Design II	4
7400:433	Residential Design	3
7400:434	Commercial Design	3
	Total Hours Required	38

• Students must select 6 credits from the following:

7100:121	Three-Dimensional Design	3
7100:244	Color Concepts	3
7400:257	Introduction to AUTOCAD for Interior Design	3
7400:258	Light in Man Made Environments	3
7400:458	Office Design	3
7400:497	Internship: Interior Design	3

## LATIN AMERICAN STUDIES

Hugo Lijeron, Ph.D., *Director*

### Requirements

The student in the Latin American Studies Certificate Program will major in the respective disciplines: economics, geography, history, political science, sociology and Spanish.

In addition, the student will take 12 credits in the three separate disciplines chosen from the following list:

#### Political Science

3700:425	Latin American Politics	3
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#### History

3400:415	Latin America: National Origins	3
3400:416	Latin America: 20th Century	3
3400:417	United States, Latin America and Imperialism	3
3400:418	Mexico	3
3400:419	Central America and the Caribbean	3

#### Geography

3350:353	Latin America	3
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#### Sociology/Anthropology

3870:355	Indians of South America	3
3870:356	New World Prehistory	3

#### Economics

3250:460	Economic Development and Planning for Underdeveloped Countries	3
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The student is also required to study three years of Spanish or the equivalent.

## LEGAL ASSISTING

Jo Ann Harris, J.D., *Coordinator*

This certificate prepares students who already have earned an academic degree or who already have basic English, reading and writing skills to gain the technical courses necessary to assist lawyers participating in the private practice of law, corporate law or agency practice.

### Admission Requirements:

Students interested in the certificate program must meet one of the following criteria in order to be admitted:

- Bachelor's degree;
- Associate degree;
- Three years experience in providing legal assistance in a law office (within the past five years). Students must get their experience verified and it must be approved by the program coordinator.

### Graduation Requirements:

- 2.0 GPA in major;
- Minimum of 31 credits as in curriculum outline;
- No grade below a C in major.

Required coursework includes		Credits
2290:101	Introduction to Legal Assisting	3
2290:104	Basic Legal Research and Writing	3
2290:106	Business Associations	3
2290:108	Real Estate Transactions	3
2290:118	Probate Administration	4
	or	
2290:220	Legal Assisting Internship	4

• Students are required to take 15-16 hours from the following courses:

2290:110	Tort Law	3
2290:112	Family Law	3
2290:204	Advanced Legal Research	3
2290:216	Debtor-Creditor Relations	3
2290:218	Advanced Probate Administration	3
2290:214	Civil Procedures	3
2290:220	Legal Assisting Internship	4

Students interested in a **Probate** emphasis shall take 2290:204, 2290:218, 2290:220, and two other courses of their choice during the Spring Semester.

Students interested in a **Civil Litigation** emphasis shall take 2290:220, 2290:204, 2290:214 and two other courses of their choice during the Spring Semester.

### LIBRARY STUDIES (Inactive)

#### Requirements

The Certificate Program in Library Studies provides basic library skills for library paraprofessionals. It will help students meet their short-range goals in acquiring skills for immediate job placement. In addition to providing entry-level skills, the program would be responsive to the needs of small businesses who need employees with organizational skills. This certificate may be earned independent of earning a degree.

2200:100	Introduction to Library Technology	3
2200:201	Cataloging, Classifying, and Processing Materials	3
2200:202	Organizing and Operating Library/Media Centers	3
2200:203	Materials Selection	2
2200:204	Reference Procedures	3
2200:205	Information Retrieval Systems in Library Technology	3

### LINGUISTIC STUDIES

Arthur Palacas, Ph.D., *Director*

#### Requirements

Completion of six linguistically oriented courses as follows: the foundation course, two core courses and at least three elective courses. Three or more of the courses must be at the 300/400 level. (Subject to approval by the program director, other theoretically oriented linguistics courses may substitute for core courses.)

To obtain the certificate, the student must have at least two semesters of language. A student entering the program should discuss plans with the director.

#### Foundation (Required)

3300:371	Introduction to Linguistics	3
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#### Core (Minimum of two of the following)

		Credits
3300:472	Syntax	3
3600:481	Philosophy of Language	3
3870:461	Language and Culture	3
7700:230	Speech and Language Development	3
	or	
7700:430	Aspects of Normal Language Development	3

#### Electives

3300:400	Anglo Saxon	3
3300:470	History of the English Language	3
3300:471	U.S. Dialects: Black and White	3
3300:473	ST: Teaching ESL: Theory and Method	3
3300:489	ST: Sociolinguistics	3
3460:460	Artificial Intelligence and Heuristics Programming	3
3460:470	Automata, Computability and Formal Language	3
3580:405,6	Spanish Linguistics	8
3600:170	Introduction to Logic	3
3600:374	Symbolic Logic	3
3600:418	Analytic Philosophy	3
3600:471	Introduction to Metaphysics	3
5200:335	Teaching of Language Arts	5
5630:481	Multicultural Education in the United States	3
7600:325	Intercultural Communication	2
7700:111	Introduction to Phonetics	2
7700:271	Language of Signs I	3

### MANUAL COMMUNICATION

Mona S. Klingler, M.A., *Coordinator*

#### Requirements

This certificate, designed for those who use American Sign Language to communicate with the hearing impaired population, is open to undergraduate majors in any discipline as well as persons with a baccalaureate degree from the University or any other accredited institution. This certificate may also be earned independent of earning a degree.

7700:101	Beginning Sign Language I	3
7700:102	Beginning Sign Language II	3
7700:120	Introduction to Audiology/Aural Rehabilitation	4
7700:121	Psychosocial Aspects of Deafness	2
7700:201	Intermediate Sign Language	3
7700:202	Advanced Sign Language	3
7700:222	Survey of Deaf Culture in America	2

For students majoring in Communicative Disorders 7700:140 and 7700:240 (departmental required courses) will be substituted for 7700:120.

### MARKETING AND SALES TECHNOLOGY

Larry Golden, M.B.A., *Coordinator*

This program is designed for students who desire a formal, structured program in the field of Marketing and Sales but do not wish to pursue an associate or baccalaureate degree. In addition, students may have already received an associate or baccalaureate degree in another area and be interested in receiving formal training in the marketing segment of their career field.

#### Requirements

2420:101	Elements of Distribution	3
2520:103	Principles of Advertising	3
2520:106	Visual Promotion	3
2420:211	Basic Accounting I	3
2520:211	Math of Retail Merchandising	3
2520:212	Principles of Sales	3
In addition, select one of the following:		
2520:215	Advertising Projects	2
2520:217	Merchandising Projects	2
2520:219	Sales Projects	2

## MARKETING AND SALES TECHNOLOGY: ADVERTISING

Larry Golden, M.B.A., *Coordinator*

This program is designed for students who desire a formal, structured program in the field of Advertising but do not wish to pursue an associate or baccalaureate degree. In addition, students may have already received an associate or baccalaureate degree in a different area and be interested in receiving formalized training in advertising due to the pervasiveness of the field in virtually all areas of commerce.

### Requirements

		Credits
2520:103	Principles of Advertising	3
2020:224	Writing for Advertising	4
2520:215	Advertising Projects	2
2520:221	AAF—I	2
2520:222	AAF—II	2
2520:234	Humor in Advertising	2

## OFFICE ADMINISTRATION

Martha W. Vye, M.Ed., *Coordinator*

### Administrative Assistant

#### Requirements

This 32 credit program is designed for the individual who has had previous college training and/or extensive office experience and who wishes to add administrative secretarial skills to enhance career opportunities. The student will develop effective letter writing ability, use new office machines and correlate secretarial skills and administrative ability.

2040:251	Human Behavior at Work	3
2420:103	Role of Supervision in Management	3
	or	
2540:265	Women in Management	3
2420:211	Basic Accounting I	3
2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding	3
2540:243	Internship	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4

## Office Information Management

#### Requirements

This 28 credit program emphasizes the expertise needed to operate automated office equipment. It provides students with hands-on experience using automated devices including microcomputers, facsimile devices, micrographics systems, telecommunications and transmission equipment, as well as the knowledge needed to manage the information generated by this equipment.

#### Courses

2540:129	Information/Records Management	3
2540:130	Introduction to Office Automation	4
2540:131	Computerized Document Control	4
2540:247	Automated Office Systems	4
2540:248	Advanced Office Technologies	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4

## Word Processing

#### Requirements

This 26 credit program is designed to enable the student who has some begin-

ning keyboarding skills to prepare for an entry-level job in word processing. Study focuses on the applied use of word processing procedures and equipment in a word processing office environment. All courses may be applied toward an associate degree in Office Administration.

#### Courses

		Credits
2540:119	Business English	3
2540:130	Introduction to Office Automation	4
2540:151	Intermediate Keyboarding	3
2540:253	Advanced Keyboarding/Word Processing	3
2540:263	Business Communications	3
2540:270	Office Software Applications	4
2540:271	Desktop Publishing	3
2540:281	Machine Transcription	3

## PEACE STUDIES

John F. Seiberling, L.L.B., *Director*

The Center for Peace Studies offers two interdisciplinary programs, one leading to a Certificate in Peace Studies, the other to a Certificate in Conflict Resolution/Management. Certificates awarded are in addition to any degree the student receives in his or her major field of concentration. Both programs are at the undergraduate level, but are open to post-baccalaureate students. All courses carry full academic credits. The programs are meant to add further dimensions to the student's major field. The awarding of a certificate is not contingent upon completion of a degree program.

### Admission Procedure

Students must:

- Be formally admitted as an undergraduate or be a post-baccalaureate student.
- If undergraduate, receive concurrence from their major adviser to pursue this area of study.
- Make formal application to the program through form available at the Center for Peace Studies.
- Schedule an interview with the Director of the Center for Peace Studies.

### Peace Studies Certificate

To satisfy the requirements for a certificate in Peace Studies, a student must complete at least 15 credits from the courses listed below. The courses must be distributed so that work will be included from three separate departments. Where specialized training is relevant to a particular student's interest, alternatives to those on the list of acceptable courses may be approved by the director.

#### Required courses (6 credits):

3003:301	Value Concepts on Peace and War	3
3400:380	Peace and War: The Historical Perspective	3

#### Elective Courses (9 credits)

3003:230	Introduction to Conflict Management/Resolution	3
3003:300	ST: Alternatives to Violence	3
3003:350	Independent Study in Peace Studies	1-3
3003:378	Introduction to Human Rights Concepts	3
3003:382	The Vietnam War	3
3003:390	Workshop in Peace Studies	1-3
3010:201	Man and the Environment	2
3250:385	Economics of Natural Resources and the Environment	3
3250:450	Comparative Economic Systems	3
3250:460	Economic Development and Planning for Underdeveloped Countries	3
3250:461	Principles of International Economics	3
3300:489	Seminar in 20th Century Literature and History	3
3350:100	Introduction to Geography	3
3350:320	Economic Geography	3
3350:450	Development Planning in the Third World	3
3400:460	United States Diplomacy to 1919	3
3400:461	United States Diplomacy Since 1914	3
3400:474	The United States, Latin America and Imperialism	3
3400:438	Nazi Germany	3
3400:482	War and Western Civilization	3
3600:120	Introduction to Ethics	3
3600:324	Social and Political Philosophy	3

		Credits
3700:220	American Foreign Policy	3
3700:303	Introduction to Political Thought	3
3700:310	International Politics and Institutions	4
3700:312	The Politics of International Trade and Money	3
3700:322	Soviet and East European Politics	3
3700:341	The American Congress	3
3700:406	Politics in the Middle East	3
3700:410	International Defense Policy	3
3700:415	Comparative Foreign Policy	3
3850:321	Population	3
3870:150	Cultural Anthropology	4
4100:203	Environmental Science and Engineering	2

## Conflict Resolution/ Management Certificate

This program focuses on principles and skills for achieving non-violent resolution of conflicts and tensions. It consists of a minimum of 21 semester credit hours. Eleven of these must be at the 300/400 level.

### Required Courses (6 credits)

3003:230	Introduction to Conflict Management/Resolution	3
3003:430	Integrative Approaches to Conflict Management/Resolution	3

### Basic Background Courses (6 credits)

Choose two courses from the following list in consultation with adviser. This requirement is designed to provide general ideas and tools.

3003:378	Introduction to Human Rights Concepts	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3
3700:303	Introduction to Political Thought	3
3700:304	Modern Political Thought	3
3870:150	Cultural Anthropology	4
7600:235	Interpersonal Communication	3
7600:325	Intercultural Communication	3

### Topical Courses (9 credits)

Choose courses in one of the following areas. The area chosen need not be, but in most instances, will be related to a student's major or minor.

- Business/Economics/Labor
- Community/Social/Family
- Education
- History/Government/Politics

### Business/Economics/Labor

2880:232	Labor Management Relations	3
3250:330	Labor Problems	3
3250:431	Labor and Government	3
3250:432	Economics and Practice of Collective Bargaining	3
3750:240	Introduction to Industrial/Organizational Psychology	4
3850:443	Industrial Sociology	3
6400:325	Business and Society	3
6500:301	Management: Principles and Concepts	3
6500:302	Introduction to Organizational Behavior	3
6500:341	Human Resource Management	3
6500:342	Labor Relations	3
6500:455	Management of Arbitration	3
6500:458	Managerial Arbitration, Mediation, Conciliation	1-3
6500:471	Management Problems	3
7600:344	Group Decision Making	3
7600:435	Communication In Organizations	3

### Community/Social/Family

2220:110	Social Values and Criminal Justice Process	3
2260:280	Fundamentals of Volunteer Management	3
3750:340	Social Psychology	4
3750:435	Cross Cultural Psychology	4
3850:315	Sociological Social Psychology	3
3850:320	Social Inequality	3
3850:335	Social Behavior in Organizations	3
3850:341	Political Sociology	3
3850:421	Racial and Ethnic Relations	3
3870:461	Language and Culture	3
3870:463	Social Anthropology	3
7400:201	Courtship, Marriage and the Family	3

		Credits
7400:362	Family Life Management	3
7400:401	Family Life Patterns in the Economically Deprived Home	2
7400:404	Adolescence in the Family Context	3
7400:496	Parenting Education	3
7600:225	Listening	1
7600:227	Nonverbal Communication	3
7600:252	Persuasion	3
7600:344	Group Decision Making	3
7750:270	Poverty in the United States	3
7750:410	Minority Issues in Social Work Practice	3
7750:430	Human Behavior and Social Environment for Social Workers	3

### Education

3850:442	Sociology of Education	3
5200:350	Multicultural Education: Concepts, Programs, and Practices	3
5300:460	Classroom Dynamics	2
5550:194	Sports Officiating	2
5610:456	Special Education Programming: Severe Behavior Handicapped	3
5630:483	Preparation for Teaching Culturally Different Youth	3
5850:204	Human Relations in Education	3

### History/Government/Politics

3250:450	Comparative Economic Systems	3
3250:460	Economic Development and Planning for Underdeveloped Countries	3
3400:460	U.S. Diplomacy to 1919	3
3400:461	U.S. Diplomacy since 1914	3
3600:324	Social and Political Philosophy	3
3700:220	American Foreign Policy	3
3700:310	International Politics and Institutions	4
3700:326	Politics of Developing Nations	3
3700:341	The American Congress	3
3700:415	Comparative Foreign Policy	3
3700:461	Supreme Court and Constitutional Law	3

## PLANNING WITH AN EMPHASIS ON CITY OR REGIONAL RESOURCE STUDIES

Charles Monroe, Ph.D., *Department Chair*

### Requirements

This program is intended to enhance understanding of the planning function and to increase the research and analytical abilities of the person preparing for work in, or who is currently engaged in, city, urban, regional, environmental and resource planning. The program is open to the undergraduate, as well as a person with a baccalaureate degree, employed in local agencies doing related work, e.g., urban renewal, community redevelopment, community action, environmental protection and private industry. The person with a degree can enroll as a postbaccalaureate or special student.

### Program

- Employment or internship in a planning agency or in an office engaged in related work; or a sincere intention to pursue a professional career in some aspect of government work or planning after graduation.
- A statement by the applicant giving reasons for wishing to participate in the planning certificate program.

### Core

Complete five of the following:

3250:244	Introduction to Economic Analysis	3
3350:320	Economic Geography	3
3350:433	Introduction to Planning	3
3350:495	Soil and Water Field Studies	3
3370:200	Environmental Geology	3
3400:436	The American City	3
3700:210	State and Local Government and Politics	3
3700:380	Urban Politics and Policies	4
3850:425	Sociology of Urban Life	3
4300:450	Urban Planning	2

**Electives**

Each student's program (subject to the program director's approval) is to include six elective courses distributed between professional, technical and research offerings. Three courses will be from the professional listing and three from the technical-research listing. In consultation with the program director, elective courses will be selected from University offerings either in the city planning or regional resource planning emphasis areas. Similar courses completed at this or other universities, up to five years prior to admission to candidacy, may be approved by the director.

The intent of the elective requirements is to facilitate the development of a diverse perspective which is significant for a person who will be or is already engaged in planning for present and changing future urban, regional, environmental, resource, energy and societal needs. The truly comprehensive planner must have academic acquaintance with a variety of professional and technical approaches to cope with social, geographical, physical design, economical and governmental problems. Selecting courses that duplicate or continue interests already well established in a student's background will be discouraged.

**Project**

Upon completion of the core and elective course requirements, the student will take 3350:385 Planning Seminar (one credit). In this seminar the student will produce a final paper covering a city or regional resource planning topic chosen by the student and approved by the director of the program. Each project will be presented to the seminar class and critically analyzed.

A grade of "C" or better is required in all courses undertaken as part of the certificate program. In the five core courses an average grade of "B" is required.

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## PROFESSIONAL COMMUNICATION

Joseph F. Ceccio, Ph.D.; Dudley Turner, Ph.D., *Co-directors*

**Requirements**

The program will help meet our technological society's growing need for educated people who can develop sophisticated strategies for effective communication of business and technical information. People in the business community increasingly depend on communication to solve complex management, sales and information processing problems. The communication demands of business and industry are significant, and in many ways, different from those dealt with in traditional courses and majors. Undergraduates in various fields and those who already possess a baccalaureate degree will wish to study specifically to meet communication demands. A formal certificate will recognize their preparation for handling the communication needs of business and industry. This certificate must be earned concurrently with an undergraduate (associate or bachelor's) degree. A student who already possesses an undergraduate degree may directly pursue this certificate.

**Program**

		<i>Credits</i>
3300:390	Professional Writing I	3
3300:391	Professional Writing II	3
7600:309	Public Relations Publications	3
7600:345	Business and Professional Speaking	3

The two 3300 courses listed cannot count toward the 35 credits in English required of English majors. Because all four courses have prerequisites, students should consult course descriptions in Section 8 for each course description.

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## PROFESSIONAL SELLING

Jon M. Hawes, Ph.D., CSE, *Coordinator*

This certificate program provides students with the opportunity to develop and document professional selling skills. It is especially appropriate for students pursuing non-business baccalaureate degrees with an interest in technical sales careers upon graduation. It is also a valuable means for postbaccalaureate students to learn professional selling skills in order to enhance their employment potential.

**Requirements**

A total of 15 credit hours are required for the certificate program. The student must complete 12 credit hours of required courses. In addition, a 3-credit hour course must be selected from a list of electives.

**Program**

• Required: Complete all courses – 12 credits		<i>Credits</i>
6600:300	Marketing Principles	3
6600:370	Purchasing	3
6600:375	Professional Selling	3
6600:480	Sales Management	3
• Elective: Complete one (1) course – 3 credits		
6600:355	Buyer Behavior	3
6600:470	Business to Business Marketing	3
7600:227	Nonverbal Communication	3
7600:235	Interpersonal Communication	3
7600:252	Persuasion	3

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## PROGRAMMING SKILLS ENRICHMENT

The Programming Skills Enrichment Certificate is designed to update the skills and qualifications of the experienced programmer through a selection of courses reflecting recent advances in computer software and development tools.

The student should select 12 hours from the following courses:

2440:125	Lotus 1-2-3	2
2440:151	PC DOS Fundamentals	1
2440:220	Software Application for Business	2
2440:235	Current Programming Topics	2
2440:243	Information Center Practicum	3
2440:247	Microcomputer Hardware and Software Section	3
2440:252	Job Control Language	2
2440:262	COBOL Efficiency	2
2440:263	Data Base Concepts	3
2440:267	4GL for Micros: dBase III+	3
2440:269	C Programming and UNIX	2

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## REAL ESTATE

Joyce Mirman, M.S.T.E., *Acting Coordinator*

**Requirements**

This certificate program in real estate requires a minimum of 18 credit hours.

The program of studies has been designed to serve the practicing and prospective real estate broker. The awarding of this certificate is not contingent upon completion of a degree program but requires the student to complete the course work with a minimum 2.00 grade-point average. A minimum of 12 credit hours must be earned in the University's Real Estate Program.

**Admission**

All certificate applicants must apply to the University and meet its admission requirements. The person wishing to pursue a certificate must sign a contract with the Community and Technical College which shall indicate the required course of study and such work that may be transferred from real estate programs outside the University.

**Program**

<b>Core</b>		
2430:105	Real Estate Principles	2
2430:185	Real Estate Law	2
2430:245	Real Estate Finance	2
2430:255	Valuation of Residential Property	2

2430:265	Real Estate Brokerage	Credits
2430:275	Real Estate Projects	2
2520:212	Principles of Sales	4

**Electives Minimum of one course**

2040:242	American Urban Society	3
2420:170	Business Mathematics	3
2420:202	Personnel Practices	3
2430:115	Elements of Housing Design and Construction	2
2530:125	Elements of Land and Real Estate Development	2
2430:205	Introduction to Real Estate Management	3
2430:215	Essentials of Real Estate Economics	2
2430:225	Industrial Real Estate	2
2430:235	Commercial Real Estate	2
2440:120	Computer Software Fundamentals	3
2520:103	Principles of Advertising	3

**RUSSIAN AREA STUDIES**

Barbara Clements, Ph.D., *Coordinator*

**Requirements**

To obtain a certificate in Russian Area Studies, the undergraduate will satisfy the requirements for a baccalaureate major in the field of study of his or her choice. In addition the student will complete two years of Russian language(14 credits) and will also complete 12 additional credits in courses dealing with the study of Russia. These courses may be selected from the following list:

**Economics**

3250:450/550	Comparative Economic Systems	3
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**Geography**

3350:358	U.S.S.R.	3
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**History**

3400:458/558	Russia to 1801	3
3400:459/559	Russia since 1801	3

**Political Science**

3700:300	Comparative Politics	4
3700:322	Soviet and East European Politics	3

**SMALL BUSINESS MANAGEMENT**

Augustus L. Harper, M.B.A., *Coordinator*

This program is designed to address the expressed needs of small business students, many of whom are presently, or soon will be, small business owners and are interested in acquiring specific knowledge that will help them in their business immediately. This program would be valuable for many non-business majors who could benefit by this exposure to business concepts. The emphasis is on serving the objectives of those students seeking autonomy in exercising their initiative and ambition, including both traditional and non-traditional students.

The awarding of this certificate is not contingent upon completion of a degree program.

2420:117	Small Business Development	3
2420:118	Small Business Management and Operations	3
2420:170	Business Mathematics	3
2420:211	Basic Accounting I	3
2420:227	Entrepreneurship Projects	4
2420:280	Essentials of Law	3
2440:120	Computer and Software Fundamentals.	2
2540:119	Business English	3

**SUPERVISION AND MANAGEMENT**

Stanley B. Silverman, M.A., *Coordinator*

The Supervision and Management Certificate Program is aimed at providing knowledge and skills to the new and existing supervisor as well as to the individual who aspires to a supervisory position. The certificate program has been carefully designed to be flexible in order to meet the needs of various organizations and individuals. This program is in response to what many employers in the area have identified as a need that the Community and Technical College could help them meet. This certificate may be earned independent of earning a degree.

A minimum of 21 semester hours is required as follows:

**Interpersonal Skills**

2040:240	Human Relations	Credits
2040:251	Human Behavior at Work	3
		3

One course must be taken from each of the following three categories:

**Management Theory and Skills**

2250:260	Administration in the Public Services	3
2420:103	The Role of Supervision in Management	3
2880:100	Basic Principles of Manufacturing Management	4

**Communication Skills**

2020:121	English	4
2020:222	Technical Report Writing	3
2540:263	Business Communications	3

**Math**

2030:141	Math for Data Processing I	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2420:170	Business Mathematics	3

In addition to the above courses, a minimum of 6 credits must be completed from the following:

2040:247	Survey of Basic Economics	3
2420:121	Office Management	3
2420:202	Personnel Practices	3
2420:211	Basic Accounting I	3
2440:120	Computer and Software Fundamentals	2
2540:265	Women in Management	3
2880:210	Controlling and Scheduling Production	2
2880:232	Labor Management Relations	3
2880:241	Introduction to Quality Assurance	3

**SURGEON'S ASSISTANT (Inactive)**

Anthony Charley, B.S.T.E., C.S.T., S.A., *Coordinator*

The program provides skills necessary to function as a surgeon's assistant and all the courses needed to sit for the certifying exam. It will enable students to meet short-range goals in acquiring skills for immediate job placement. Limited to persons already holding an associate degree in Surgical Technology. Selective Admission.

2770:153	Clinical Experience III	5
2770:243	Introduction to Medicine	2
2770:244	Medical History and Physical Evaluation	2
2770:245	Roentgenogram Assessment	1
2770:246	Medical Laboratory Procedures	1
2770:247	Pulmonary Assessment: EKG	2
2770:249	Surgical Anatomy II	3
2770:254	Clinical Experience IV	3
2770:255	Clinical Experience V	5
2770:256	Primary Care: Clinical Experience	2

## SURGICAL TECHNOLOGIST

Anthony Charley, B.S.T.E., C.S.T., S.A., *Coordinator*

The program provides skills necessary to function as a surgical technologist and all the courses needed to sit for the certifying exam. It will enable students to meet short-range goals in acquiring skills for immediate job placement. A certificate may be earned independent of earning a degree.

		Credits
2740:120	Medical Terminology	3
2740:230	Basic Pharmacology	3
2770:100	Introduction to Surgical Assisting Technology	4
2770:121	Surgical Assisting Procedures I	2
2770:131	Clinical Application I	2
	or	
2770:151	Clinical Experience I*	
2770:148	Surgical Anatomy I	3
2770:222	Surgical Assisting Procedures II	4
	or	
2770:249	Surgical Anatomy II*	
2770:232	Clinical Application II	5
	or	
2770:152	Clinical Experience II*	
2770:233	Clinical Application III	5
3100:130	Principles of Microbiology (School Lab)	3
3100:208	Human Anatomy and Physiology (School Lab)	4
3100:209	Human Anatomy and Physiology (School Lab)	4

## TEACHING ENGLISH AS A SECOND LANGUAGE†

Kenneth J. Pakenham, Ph.D., *Director*

### Requirements

This program is intended for those who seek training in the teaching of English as a second language (ESL) at the elementary or high school level or who wish to obtain an initial qualification in teaching ESL in order to teach in settings other than the Ohio public school system.

The program is designed to introduce the student to the central issues in the theory and practice of teaching English to non-native speakers through courses in modern and applied linguistics, in second language pedagogy and in related disciplines.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of at least 550.

### Program

This certificate requires the completion of four core courses and two elective courses for a minimum of 18 credits.†

#### Core

3300:473	Special Topics: Teaching ESL: Theory and Method	3
3300:489	Special Topics: Grammatical Structures of English	3
5630:481	Multicultural Education in the U.S.**	3
	or	
3300:489	Special Topics: Sociolinguistics**	3
5630:487	Techniques for Teaching ESL	3

#### Electives

3300:371	Introduction to Linguistics	3
3300:389	Special Topics in Linguistics	3
3300:470	History of the English Language	3
3300:472	Syntax	3
3300:489	Special Topics: Sociolinguistics†	3

\* Clinical Experience I and II will be accepted in place of Clinical Applications I and II for students who have completed the Surgeon's Assistant Option. Surgical Anatomy II will be accepted in place of Surgical Assisting Procedures II for students who have completed the Surgeon's Assistant Option.

† The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

\*\* Choice to be decided in consultation with the program director.

‡ May not be taken both as an elective and as a core course.

3580:405	Spanish Linguistics	4
3870:461	Language and Culture	3
5630:485	Teaching Reading and Language Arts to Bilingual Students	4
7600:325	Intercultural Communication	3
7700:230	Speech and Language Development	3
7700:430	Aspects of Normal Language Development	3

## TECHNICAL TRAINING

Persons are eligible for admission to the Certificate in Technical Training if they have been admitted to study as special, non-degree or full-time students in any department of the University. Undergraduate students will earn the certificate upon graduation from their degree program. Individuals who already hold undergraduate degrees or graduate degrees may also pursue the certificate. Students with an undergraduate degree and who do not seek a graduate degree may pursue the certificate at the post-baccalaureate level. Students enrolled in the undergraduate and post-baccalaureate program will enroll in the courses at the undergraduate level.

Those formally admitted to The University of Akron and meeting the Certificate entrance requirements may pursue the Certificate in Technical Training. Students shall seek admission to this program by filing an application with the program coordinator. The student will schedule courses with the assistance of an advisor in the Technical Education Program.

### Requirements

Minimum: 18 credit hours

		Credits
5100:420	Introduction to Computer-Based Education	3
5400:400	The Postsecondary Learner	3
5400:403	Practicum	2
5400:415	Training in Business/Industry	3
5400:430	Curriculum Development in Technical Education	2
5400:431	Curriculum Development in Technical Education/Lab	1
5400:435	Instructional Techniques in Technical Education	4

**NOTES:** The Practicum course is the last taken and cannot be taken until all other certificate courses have been completed with a 3.0 GPA or better. 5400:430 and 5400:431 must be taken together and before 5400:435.

## TRANSPORTATION STUDIES

Arthur George, M.B.A., *Coordinator*

The certificate program in Transportation Studies is aimed at developing technical knowledge and skills in the area of freight transportation management.

		Credits
2560:110	Principles of Transportation	3
2560:118	Transportation Rate Systems	3
2560:221	Traffic and Distribution Management	3
2560:222	Microcomputer Applications in Transportation	3

In addition to the above core, a minimum of six semester credits must be completed from the following:

2560:115	Motor Transportation	3
2560:116	Air Transportation	2
2560:117	Water Transportation	2
2560:224	Transportation Regulation	3
2560:227	Transportation of Hazardous Materials and Waste	2

This certificate program in Transportation Studies may be earned independent of earning a degree.

## TRAVEL AND TOURISM

Arthur George, M.B.A., *Coordinator*

The certificate program in Travel and Tourism will provide intensive training in the management of travel. It is designed for those individuals interested in acquiring the basic skills necessary in travel agency operations. This certificate may be earned independent of earning a degree.

A minimum of 15 semester hours is required.

Required courses:

		Credits
2560:110	Principles of Transportation	3
2560:116	Air Transportation	2
2560:228	Introduction to Travel	2
2560:229	Passenger Ticketing	2
2560:230	Tour Planning and Packaging	2
2560:231	Computerized Reservations I	2
2560:232	Computerized Reservations II	2

## VOLUNTEER PROGRAM MANAGEMENT†

John Mumper, J.D., *Coordinator*

This program is intended for individuals who wish to enhance their knowledge of volunteer program management. As community and social service organizations continue to rely on knowledgeable, well-trained volunteers, the role of the manager of the volunteer programs continues to be highly valued. This program is not limited to Community Services majors.

This certificate program is generally designed for individuals in one of the following categories:

- The person with no degree but who is contemplating working in a social/community service organization, especially with volunteers.
- The person with a degree who has not had specialized training, but would like to be a director/coordinator of an organization's volunteer program.
- Those persons working in or with volunteer programs who would like to upgrade their knowledge and skills.

Persons interested in this program should consult with the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College.

### Requirements

2260:100	Introduction to Community Services	3
2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2260:278	Techniques of Community Work	4
2260:279	Technical Experience: Community and Social Services	5
2260:280	Fundamentals of Volunteer Management	3
2260:281	Recruitment and Interviewing Volunteers	3

## WOMEN'S STUDIES

For information, contact the Interdisciplinary Office, located in Leigh Hall 201, (216) 972-7008.

Interdisciplinary and personalized, the Women's Studies certificate fosters a critical approach to knowledge about women; at the core of its intellectual agenda is diversity. By focusing on cultural practices that have largely excluded and devalued differences in gender, sexual orientation, ethnicity, race, and class, Women's Studies prepares students to appreciate and act in a pluralistic world. The Women's Studies certificate integrates scholarship and research on women and gender from literature, psychology, history, sociology, and communication. Students are challenged to debate assumptions, explore divergent viewpoints, and discover the partial and often self-interested emphases of our society's most powerful institutions – family, church, academia, business, and government.

The Women's Studies Program helps students to evaluate what they have been taught and, most importantly, it empowers them to claim their educations – ones not readily available in the traditional university curricula – and to work for social justice after their educations. Students find their own voices and develop the esteem necessary to articulate their own views. Out of such opportunities, a student culture of respect and tolerance emerges to support lasting communities that value and promote individual worth, collective action, and intellectual courage.

Students may enroll in any Women's Studies courses and/or make an appointment with the director to discuss a plan of study. Students need not be enrolled in the certificate program to take Women's Studies courses. This certificate may be earned independently of a degree.

### Admission

To participate in the program, the student must:

- Be formally admitted to The University of Akron as 1) an undergraduate seeking a baccalaureate degree; 2) a postbaccalaureate student; or 3) by special admission for a free-standing certificate.
- Make written application to the program countersigned by the student's major academic adviser.
- Receive written notification of admission from the Director of the Women's Studies Program.
- Consult with the Director of the Women's Studies Program to formulate a program of study.

### Program

#### Requirements

Total Credits Required: 19

#### Core:

		Credits
3001:300	Introduction to Women's Studies	3
3001:490	Women's Studies Lecture Series	1
3001:493	Individual Studies on Women	1-3

#### Electives: 12 credits (two courses 300-400 level).

- One course from each of the following three areas: humanities, social sciences, fine and applied arts, and a second cross-listed course from any area.

#### Humanities

3300:282	Drama Appreciation: Women in Modern Drama	3
3300:386	Women in Modern Novels	3
3300:389	Special Topics: Ethnic Women in Literature	3
3300:389	Special Topics: Women Writers	3
3300:489*	20th Century Women Writers	3

#### Social Sciences

3250:440*	Special Topics: Women in the Labor Force	3
3400:325	Women in Modern Europe	3
3400:350	Women in the U.S.	3
3400:364	American Family History	3
3400:383	Soviet and U.S. Women in the 20th Century	3
3400:400	Women in Revolutionary China	3

† The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduation certificate programs require a 3.00 grade-point average.

\* Available also at the graduate level.

*Credits*

3700:392	Selected Topics in Political Science: Future of Women in World Politics	3
3700:392	Selected Topics in Political Science: Women and Empowerment in American Politics	3
3700:480*	Policy Problems: Women and Health	4
3750:480	Special Topics: Psychology of Women	3
3850:344	The Sociology of Sex Roles	3
3850:423*	Sociology of Women	3

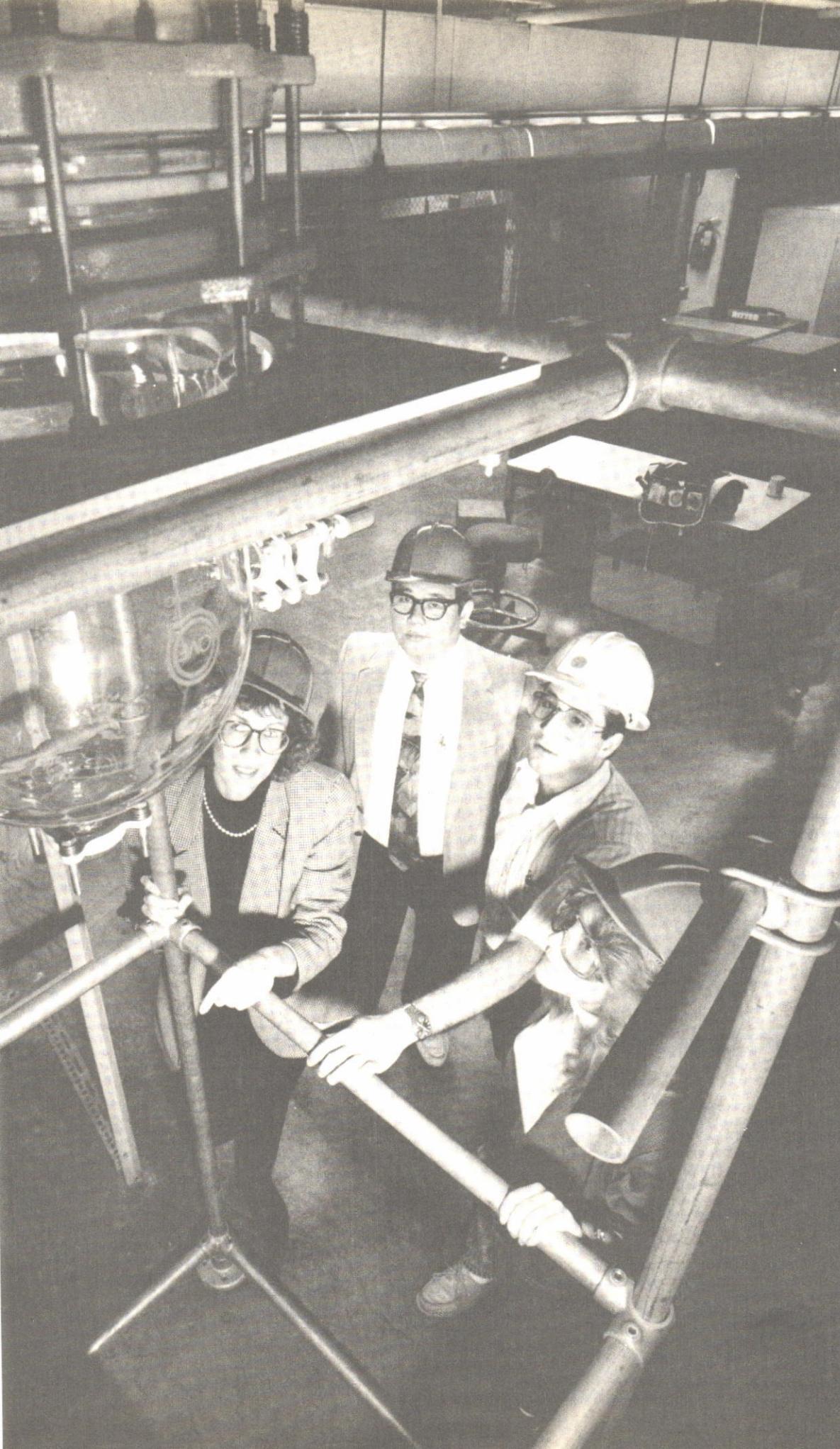
**Fine and Applied Arts**

7400:201	Courtship, Marriage, and Family Relations	3
7400:442	Human Sexuality	3
7600:408*	Women, Minorities and News	3
7600:450	Special Topics: Women, Minorities, and Film	3
7750:411*	Women's Issues in Social Work Practice	3
7750:480*	Special Topics: Gay and Lesbian Issues	3

**Electives in Education, Institute for Life-Span Development, Community and Technical College, and Women's Studies Workshops**

2200:290	Special Topics: Women and Chemical Dependency	2
2540:265	Women in Management	3
3001:100	Social and Cultural Diversity in the U.S.	3
3001:110	Multicultural Sensitivity Training	1
3001:490	Workshop: Women, Minorities, and Media	3
3001:490	Workshop: Women's Studies Lecture Series	1
3006:490	Workshop: Women in Mid-Life	2
5100:480	Special Topics: Historical and Current Perspectives on the Education of Women	3

\* Available also at the graduate level.



# 7

Research  
centers  
and  
institutes

# Research Centers and Institutes

## University Research Council:

Nicholas Sylvester, Ph.D., *Vice President for Research and University Development (chair)*

Associate Vice President for Research, *to be named (member)*

Frank Kelley, Ph.D., *Dean, College of Polymer Science and Engineering (member)*

Randall Moore, Ph.D., *Dean of Buchtel College of Arts and Sciences (member)*

C.S. Chen, *Interim Dean, College of Engineering (member)*

Charles Dye, Ph.D., *Dean, Graduate School (member)*

Charmaine C. Streharsky, Ed.D., *Director of Research Services and Sponsored Programs (member and secretary)*

Ted Mallo, J.D., *Assistant Professor, General Counsel, (member, ex officio)*

Virginia Gunn, Ph.D., *Faculty Senate Nominee (member)*

Antonia Forster, Ph.D., *Faculty Senate Nominee (member)*

James White, Ph.D., *Institute of Polymer Engineering, (member)*

In the past, colleges and universities have been thought of as ivy-covered storehouses of knowledge where neatly packed information was dispensed to eager students. But this has never been true, for it is here that much of the new knowledge is developed. And with the accelerating tempo of our times, there is an increased call for universities to provide more information to enable society to cope.

The University of Akron is alive to this challenge and has sought to develop its research program with an eye to the needs of the society it serves. Here the emphasis is on work that is relevant. The University's concern with relevant research has been the number of interdisciplinary teams that have been put together to tackle specific problems. For instance, problems in connection with water pollution have used the services of chemists, biologists and chemical, mechanical and civil engineers. While the planning and organization of a research project is usually carried out by or with the assistance of a faculty member, both graduate and undergraduate students have the opportunity to participate, depending on the nature of the project and the skills and knowledge required.

Sponsored research activities on campus are coordinated by the Associate Vice President for Research and the Director of Research Services and Sponsored Programs (UASC). The University Research Council is responsible for encouraging, supporting, and making recommendations pertaining to sponsored and contractual research carried out at the University's departments, centers, and institutes. The council consists of the Vice President for Research and University Development, the Associate Vice President for Research, the Director of Research Services and Sponsored Programs, various college deans, and General Counsel.

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## Ray C. Bliss Institute of Applied Politics

John C. Green, Ph.D., *Director*

The Ray C. Bliss Institute of Applied Politics is a public education and research adjunct of The University of Akron and its Department of Political Science. The broad purposes of the institute, in keeping with the career of its namesake, Ray C. Bliss, are: to give all citizens, and particularly students, an opportunity to learn how to become active and competent in political life; to help maintain a tradition of ethical public service in politics; to foster useful relationships between applied politics and political science; to promote public comprehension of political organizations and the requirements for their effectiveness; and to improve understanding of continuity and change in American political institutions.

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## Institute for Biomedical Engineering Research

Stanley Rittgers, Ph.D., *Director*

This institute was established in 1979 to promote interdisciplinary studies in the rapidly growing areas of knowledge which overlap the fields of biology and medi-

cine, on the one hand, and engineering and the physical sciences, on the other. It conducts seminars, courses and degree programs in biomedical engineering in association with the College of Engineering and individual departments.

In addition to its research and educational functions, the institute provides a research service to local hospitals and industry, as well as to private and government agencies. The premise for this program is that the combined resources of the University, Northeastern Ohio Universities College of Medicine and affiliated organizations will often permit more cost-effective solutions than would be possible by an individual or group doing the research independently.

The work of the institute is carried out by faculty of the Department of Biomedical Engineering in association with "members" selected from the faculties of The University of Akron and Northeastern Ohio Universities College of Medicine, as well as from the ranks of area physicians, engineers and scientists. The institute and the department occupy the third floor of the Olson Research Center on the north edge of the campus.

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## Center for Economic Education

Fred M. Carr, Ph.D., *Director*

The center exists to improve the economic literacy of individuals to help them function competently as citizens, producers and consumers.

The center conducts workshops, seminars and economic programs for teachers, students and interested groups. It provides consulting services in the area of economic education and acts as a clearinghouse for the gathering and dissemination of economic education materials and programs. It also fosters an understanding and appreciation of the American economic system.

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## Center for Environmental Studies

Annabelle M. Foss, Ph.D., *Interim Director*

The Center for Environmental Studies matches the expertise of 95 affiliates in 33 disciplines with the needs of students seeking study and research opportunities in complex environmental issues. Since its founding in 1970, the center has sponsored, or in other ways supported, activities appropriate to the goal of attaining a quality environment for mankind.

The center coordinates special forums, workshops and seminars that address major issues. Examples include the National Energy Forum, the World Food Forum, and Evaluation of Environmental Data. Workshops on energy, natural history and environmental studies in England also emphasize the interdisciplinary approach to the resolution of issues.

The center provides programs of environmental studies in the Cuyahoga Valley National Recreation Area (CVNRA). These programs are operated through the University's Cuyahoga River Interpretive Center. Water research is a major role of the Center.

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## Center for Family Studies

Helen K. Cleminshaw, Ph.D., *Director*

Nancy B. Miller, Ph.D., *Associate Director of Research*

The Center for Family Studies, established in 1979, was designed to stimulate and encourage the interdisciplinary study of the family. It serves both the University and the community by fostering collaboration between faculty, students, practitioners and community leaders on curriculum development, educational conferences and seminars, research and training, and public policy relevant to important family issues.

The Center is represented by faculty from five colleges and over 15 disciplines. It also includes leaders from various community systems, such as the schools, hospitals, courts, churches, mental health, social and health care agencies. In addition, the Center has a fellows program in which outstanding faculty and community leaders are named as either fellows, adjunct fellows or senior fellows.

The Center offers certificates in the following specialty areas: Divorce Mediation and Home-Based Intervention. Please refer to the sections on Certificate Programs in this Bulletin and the General Bulletin for further information.

Any student, faculty member or community person interested in family issues is invited to call the director to learn how they can participate or learn more about the Center's activities.

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## Training Center for Fire and Hazardous Materials

David H. Hoover, Ph.D., *Director*

The Training Center for Fire and Hazardous Materials brings the University, government and industry together into one comprehensive regional center to integrate educational programs, fire and hazardous materials training and other applications of fire and safety technology. The center coordinates seminars and workshops presented by the Federal Emergency Management Agency (FEMA), the Division of State Fire Marshal and other related organizations. Training in all phases of hazardous materials containment and fire prevention and control is provided under contract to various municipalities, industries and agencies. The programs are supported by the faculty of the Fire Protection Technology degree program in association with other state and nationally recognized professionals.

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## Fisher Institute for Professional Selling

Jon M. Hawes, Ph.D., *Director*  
James T. Strong, Ph.D., *Associate Director*

The Fisher Institute for Professional Selling was founded in 1993. Its mission is to enhance the image of the sales profession, to promote professional selling and sales management as a rewarding lifetime career, to provide quality sales training and learning experiences, and to advance the knowledge of professional selling through the support of applied research.

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## Institute for Futures Studies

Gary Gappert, Ph.D., *Director*

The Institute for Futures Studies and Research exists to initiate and provide comprehensive programs in salient and vital policy research, including a structural framework which encompasses strategic planning, environmental scanning, trends analysis and other innovative research methods.

The Institute for Futures Studies and Research was established in 1978, with its focus on interdisciplinary courses, lectures, publications, and activities relating to relevant issues which will impact the future of the local, state, national, and international arenas. It cooperates with the Center for Urban Studies and other research institutes.

Initiated in 1987, The Ohio Policy Issues Network (OPIN) continues to research and analyze emerging policy issues in the state of Ohio and beyond. In addition, in 1990, the OPIN began to provide and disseminate viable options to a diverse range of policy problems. The bimonthly publications of the Ohio Policy Issues Network are the OPIN Policy Book, Ohio Foresight, and the Issues Analysis Report.

More recently, the Institute has undertaken initiatives relating to international activities and global studies, with a focus on education, economic and political change as well as policy development. The Institute has cooperated with the U.S. Peace Corps in both Washington, D.C. and Africa on its new urban initiatives. An Ohio-Quebec Urban Symposium was conducted in 1990 as an effort to continue promoting Great Lakes collaboration and Canadian studies. Discussions have been held in several Eastern European countries concerning urban planning and future studies. In these emerging activities, the Institute encourages involvement and cooperation of faculty, staff, and students from a variety of disciplines.

Through its relationship with the Department of Public Administration and Urban Studies and The Center for Urban Studies, the Institute has organized and produced several books relating to the urban future including the 1990 publication, *Cities in a Global Society* and the forthcoming *The Future of Urban Environments*. It has also sponsored major conferences on George Orwell, Aldous Huxley, and Edward Bellamy in cooperation with the Ohio Humanities Council.

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## Institute for Life-Span Development and Gerontology

Harvey L. Sterns, Ph.D., *Director*  
Isadore Newman, Ph.D., *Associate Director*  
Raymond E. Sanders, Ph.D., *Associate Director for Research*  
Evelyn Sutton, M.A., *Program Coordinator, Gerontology Certificate Program*  
Jerome Kaplan, Ph.D., *Program Coordinator, Nursing Home Administrator Program*

The Institute for Life-Span Development and Gerontology, founded in 1976, coordinates multidisciplinary credit certificate programs in gerontology at the undergraduate and graduate levels. In addition, this certificate is included in the Ohio Board of Examiners of Nursing Home Administrators approved course of study in Nursing Home Administration which combines a Bachelor of Science degree in Industrial Management (Personnel Option) with a Certificate in Gerontology.

Faculty fellows at the institute representing 23 University departments conduct research, and provide special courses, workshops, and seminars as well as participate in community research and demonstration projects. Students in the certificate programs carry out field placements at numerous community service settings.

Examples of outreach activities include the Elderhostel program, offered each summer for older adults who participate in a week-long residential learning experience.

The institute is a member of the Northeastern Ohio Consortium on Geriatric Medicine and Gerontology, joining together with the Office of Geriatric Medicine and Gerontology, Northeastern Ohio Universities College of Medicine; Gerontology Center, Kent State University; and Gerontology Committee, Youngstown State University.

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## Center for Nursing

Elizabeth Kinion, Ed.D., *Director*

The Center for Nursing is a part of The University of Akron's College of Nursing. It is an education and practice center for College of Nursing faculty and students as well as faculty and students from other health care disciplines on campus.

Since 1981 the Center for Nursing has provided wellness services to campus students, faculty and staff as well as outreach services to community residents of all ages. Services include health assessments and nursing physicals, stress management and self-care assistance, family and group education and support sessions. Community outreach to vulnerable populations is a major emphasis of the center.

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## Center for Peace Studies

Hon. John F. Seiberling, L.L.B., *Director*

The Center for Peace Studies provides students with the opportunity for an interdisciplinary program of study in one of the related fields of international peace or conflict resolution and management. Course programs draw on the resources of a wide spectrum of the University's academic departments. Upon completion of all selected courses, students receive not only academic credits for the courses but a Certificate in Peace Studies or a Certificate in Conflict Resolution/Management, respectively. The Center also sponsors workshops for teachers, special campus programs, and research projects. It also collaborates with community organizations and peace centers on other campuses.

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## Joint Center for Policy Research

Shara L. Davis, M.A., *Director*  
James L. Shanahan, *Director, Center for Urban Studies*

Designed as a partnership between The University of Akron's Center for Urban Studies (CUS) and Lorain County Community College's Public Services Institute, the Joint Center for Policy Research (JCPR) combines the energies of research faculty, staff and graduate students of a state university with the strong commitment of a community college in responding to local needs.

The Joint Center's primary mission is to serve the Lorain County community leaders, nonprofit organizations, government agencies, and citizens and to extend the

college's commitment to local economic development. In addition, its services are provided on a regional level.

In its third year of operation, the services being offered upon request are: Customized Policy Research and Consultation; Data Service Delivery System; and Capacity Building. Customized policy research and consultation services involve the collection of qualitative and quantitative information utilizing various data gathering techniques, primarily survey research and focus group techniques. The data service delivery system involves the sharing of information from sources including the 1990 Census data as well as data from other JCPR and CUS research endeavors. Capacity building involves training and empowering organizations with the ability to facilitate their own qualitative information collection and to use that information through the decision making process. The Joint Center carries out its projects by drawing upon the full services of the CUS Research Lab.

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## **Institute of Polymer Engineering**

James L. White, Ph.D., Director

The Institute of Polymer Engineering carries out fundamental and applied research in polymer processing, engineering performance and associated characterization.

The institute, founded in 1983, seeks to be a major intellectual and research resource in northeast Ohio. The institute maintains up-to-date and futuristic processing and characterization laboratories, with continued interest in development investigation of new process technology and new materials. Its activities also include organization of scientific symposia and various seminars related to polymer processing and engineering.

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## **The Maurice Morton Institute of Polymer Science**

Frank Harris, Ph.D., Director

The institute is concerned with basic and applied research in polymers. It was established in 1956 as the Institute of Rubber Research and in 1964 became the interdisciplinary Institute of Polymer Science. The University's first Ph.D. program in polymer chemistry was started in 1956 and was administered by the institute until a separate Department of Polymer Science was established in 1967. The institute maintains extensive laboratory facilities, an applied research group, a macromolecular modeling center, and a mini pilot plant for polymer synthesis. It is the principal organization responsible for external funding of research projects and graduate fellowships in polymer science.

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## **Process Research Center (PRC)**

Sunggyu Lee, Ph.D., Director

Kathy L. Fullerton, Ph.D., Assistant Director

The Process Research Center (PRC), founded in 1990, focuses on fundamental and applied research involving new chemical processes and novel materials.

The specialties of the PRC include chemical reactions, separation technology, new polymeric materials, biotechnology, and environmental engineering. In conjunction with this, the Center operates several scale-up and minipilot plant facilities.

The PRC aims at responding more positively to the needs of industries and enhancing cooperation between the University and industries. Great opportunities are available for both graduate and undergraduate students to conduct practical research.

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## **Small Business Institute**

Jeffrey C. Dilts, Ph.D., Director

The Small Business Institute was established in 1973 and was the first Small Business Institute funded in Northern Ohio. The Small Business Institute's objective is to offer management assistance counseling to area organizations through the utilization of senior and graduate students in the College of Business Administration, working as advisers under the supervision of College of Business Administration faculty. Nearly 300 firms have been serviced by the institute since its founding. It is an integral part of the Akron/Summit Industrial Incubator project.

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## **Survey Research Center**

Jesse F. Marquette, Ph.D., Director

Anne-Marie Scarisbrick-Hauser, Ph.D., Assistant Director

The University of Akron Survey Research Center is a research organization established with the prime objective of making quality survey research facilities available to university personnel, national, state, community, and other legitimate research agencies. The Center is equipped to facilitate telephone interviewing, mail surveys, focus group administration, intercept studies and personal interviews, database analysis, and computer assisted data entry and multiple method studies. Center staff are available for consultation in the development of grant proposals and budgets.

The Survey Research Center has been in continuous operation at The University of Akron since 1982, utilizing research and professional staff, graduate assistants, and over 50 regular interviewers. Most of the work done by the Center is on behalf of government or non-profit agencies and mass media organizations such as newspapers and television stations. The Center's work, both directly and indirectly, influences public discussion and planning on significant social and political issues. The Center has, since its inception, processed more than 98,000 completed interviews in over 100 projects concerned with topics such as national or state political and social issues, government services, economic development, and public policy planning.

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## **Center for Urban Studies**

James L. Shanahan, Ph.D., Director

The Center for Urban Studies (CUS) is The University of Akron's oldest policy research and professional service unit. Established in 1965, the Center acts as a bridge between the University and the Akron community, Ohio and beyond in pursuit of the University's urban mission. To meet the needs of urban communities the Center engages in a wide variety of scholarly and applied research projects, research consultation, and information and data services.

Using the talents of faculty, researchers, support staff, and students, the Center explores important economic, social, and political issues; works with others to reach a better understanding of these issues; and assists groups and organizations actively engaged in problem solving, coalition building, or strategic planning.

Since 1979, the Center has been the University's representative to the Ohio Board of Regent's Urban University Program (UUP) which links eight state universities to help Ohio meet the challenges of its urban future. UUP's Northeast Ohio Inter-Institutional Research Consortium focuses on the revitalization of the region through the efforts of the faculty and staff of the four urban universities in Northeast Ohio.

Over the years, the Center has expanded its programs and services, building a substantial intellectual and technological infrastructure. The majority of the Center's research and services is supported by external grants and contracts which represent UUP funding for multiyear projects, multicampus projects, and faculty research projects as well as funding from private sources for client-driven research and services.

CUS activities are organized under three broad programs: Public Policy Issues Program; Public Sector Marketing Research and Data/GIS Services Program; and Community Institution and Leadership Building Program. Increasingly, these areas are becoming distinct programs, each with its own program head, professional staff, and affiliated faculty from various disciplines and professions.

This multidisciplinary approach encourages faculty and graduate student participation from all departments with an urban focus. A part of the Buchtel College of Arts and Sciences, the Center for Urban Studies provides the setting and facilities through which interested faculty and graduate students do become involved in urban research or professional service activities in the urban community. For many graduate students, experienced gained in the Center for Urban Studies becomes an important complement to formal classroom training in their career participation.

Linked with CUS is another important center: the Joint Center for Policy Research, an innovative partnership with the Public Services Institute at Lorain County Community College which is intended to serve the needs of Lorain County for policy research services.



8

Courses  
of  
instruction

# Course Numbering System\*

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2860 Electronic Engineering Technology  
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2980 Surveying and Construction Engineering Technology

### Buchtel College of Arts and Sciences

3000	Cooperative Education	3450	Mathematics
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3200	Classics	3650	Physics
3210	Greek	3700	Political Science
3220	Latin	3750	Psychology
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3300	English	3870	Anthropology
3350	Geography and Planning	3980	Public Administration and Urban Studies**
3370	Geology		
3400	History		

### College of Engineering

4100	General Engineering	4450	Engineering Computer Science
4200	Chemical Engineering	4600	Mechanical Engineering
4300	Civil Engineering	4800	Biomedical Engineering
4400	Electrical Engineering	4980	Construction Technology

### College of Education

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6000	Cooperative Education	6400	Finance
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		6600	Marketing
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		6800	International Business
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### College of Fine and Applied Arts

7000	Cooperative Education	7700	Communicative Disorders
7100	Art	7750	Social Work
7400	Home Economics and Family Ecology	7800	Theatre
		7810	Theatre Organizations
7500	Music	7900	Dance
7510	Musical Organizations	7910	Dance Organizations
7520	Applied Music	7920	Dance Performance
7600	Communication		

### College of Nursing

8000	Cooperative Education	8200	Nursing
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### College of Polymer Science and Polymer Engineering

9841	Polymer Engineering	9871	Polymer Science
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### School of Law

9200 Law

\* A more detailed explanation of the numbering system can be found in "Course Numbering Systems," Section 3 in this Bulletin.

\*\* Graduate-level courses only. See *Graduate Bulletin*.

# Department of Developmental Programs

## DEVELOPMENTAL PROGRAMS\*

### 1020:

- 040 BASIC WRITING I** *4 load hours\*\**  
Placement. Provides intensive practice in the process of writing, in sentence structure and punctuation, and in correct written expression. Upon successful completion of Basic Writing, the student should be prepared to enter English (2020:121), or English Composition I, (3300:111).
- 042 BASIC WRITING II** *4 load hours\*\**  
Prerequisite: Basic Writing I (1020:040). Provides additional practice in the basic writing skills required for college composition. Upon successful completion of Basic Writing II, the student should be prepared to enter English (2020:121), or English Composition I (3300:111).
- 050 BASIC MATHEMATICS I** *4 load hours\*\**  
Placement. An intensive review of arithmetic and an introduction to the concepts of elementary algebra. Emphasis is placed on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics I, the student should be prepared to enter Basic Mathematics II.
- 052 BASIC MATHEMATICS II** *4 load hours\*\**  
Prerequisite: Basic Mathematics I (1020:050), or placement. A brief review of arithmetic and intensive instruction in elementary algebra. Emphasis is placed on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics II, the student should be prepared to enter Business Mathematics (2420:170); Introduction to Technical Math (2020:130); Elements of Math I (2030:151); or Preparatory Math (3450:100).
- 060 COLLEGE READING** *4 load hours\*\**  
Placement. Designed to strengthen the basic comprehension skills needed for academic work, including recognition of main points and key supporting ideas, inferencing, summarizing, and vocabulary development. Upon satisfactory completion of College Reading, the student should be prepared to enter College Reading and Study Skills (1020:062)
- 062 COLLEGE READING AND STUDY SKILLS** *4 load hours\*\**  
Prerequisite: College Reading (1020:060) or placement. Continued practice of comprehension strategies with emphasis on textbook reading, and implementation of effective study strategies such as note-taking, test-taking, and memory techniques. Upon successful completion of College Reading and Study Skills, the student should be prepared to apply reading and study strategies in college classes.
- 071 DEVELOPMENTAL CHEMISTRY** *4 load hours\*\**  
Prerequisite: Basic Mathematics II (1020:052) or equivalent. A mathematics review applied to chemistry and intensive instruction in principles of general chemistry. Emphasis is placed on developing learning strategies and controlling anxieties.

## DEVELOPMENTAL PROGRAMS/SPECIAL TOPICS

### 1021:

- 299 RETENTION/SPECIAL TOPICS** *1-4 load hours\*\**  
Study of learning strategies for specific needs, such as critical thinking, vocabulary development, memory improvement, math anxiety, and various math skills.
- 299 SPECIAL TOPICS: APPLIED STUDY STRATEGIES** *2 load hours\*\**  
Prerequisite: Selected General Education Courses taken concurrently. Designed to help students apply various study strategies to a specific course, such as psychology or sociology. Includes lecture and textbook analysis, memory techniques, and test-taking strategies.
- 299 SPECIAL TOPICS: CRITICAL READING AND REASONING** *2 load hours\*\**  
Designed to aid students who have adequate basic reading skills but need to focus on the higher thinking skills. It will involve cognitive strategies that can bolster analytic thinking, retention, and test performance through self-monitoring and decision-making.

\* The Department of Developmental Programs also provides academic help to any undergraduate student via Writing, Math, and Reading Laboratories. Tutorial services are available for most first and second year courses, and a counseling service is available for developmental students. These services are all free of charge.

\*\* Load hours do not carry academic credit toward a degree program but do count in computing a student's course load for financial aid or student employment, and retention/dismissal decisions.

## ENGLISH LANGUAGE INSTITUTE

### 1030:

- 091 ENGLISH LANGUAGE INSTITUTE: WRITING**  
Provides intensive instruction in English writing for native speakers of languages other than English who are planning to seek admission to a United States university.
- 092 ENGLISH LANGUAGE INSTITUTE: READING**  
Provides intensive instruction in vocabulary and reading skills designed to develop the English reading ability of native speakers of languages other than English who are planning to seek admission to a United States university.
- 093 ENGLISH LANGUAGE INSTITUTE: SPEAKING/GRAMMAR**  
Provides intensive instruction in English grammar, with an emphasis on oral skills, for native speakers of languages other than English who are planning to seek admission to a United States university.
- 094 ENGLISH LANGUAGE INSTITUTE: LISTENING**  
Provides intensive laboratory and class instruction designed to improve the English listening skills of native speakers of languages other than English who are planning to seek admission to a United States university.
- 095 ENGLISH LANGUAGE INSTITUTE: COMPREHENSIVE**  
Provides intensive instruction in English writing, reading, listening and speaking for speakers of languages other than English who are planning to seek admission to a United States university. Offered only during the summer.

## University College

### GENERAL EDUCATION

#### 1100:

- 101 UNIVERSITY ORIENTATION** *2 credits*  
Acquisition of the skills, techniques, information, and strategies necessary to aid new students in their transition from high school or work to the college environment.
- 191 SPECIAL TOPICS: GENERAL EDUCATION** *1-4 credits*

## Air Force ROTC

### AEROSPACE STUDIES

#### 1500:

- 113.4 FIRST YEAR AEROSPACE STUDIES** *1.5 credits each*  
(AS100), General Military Course. Missions and organizations of Air Force and current events discussed to show how the military contributes to national defense. Leadership laboratory required.
- 253.4 SECOND YEAR AEROSPACE STUDIES** *1.5 credits each*  
(AS200), General Military Course. Emphasis on air power history. Films, lectures and class discussions. The politico-military environment is presented. Leadership laboratory required.
- 303.4 THIRD YEAR AEROSPACE STUDIES** *3 credits each*  
(AS300), Professional Officer Course. Management concepts in the military. Leadership theory, functions and practices; professionalism; and responsibilities. Communicative skills are developed. Leadership laboratory required.
- 453.4 FOURTH YEAR AEROSPACE STUDIES** *3 credits each*  
(AS400), Professional Officer Course. Focuses attention on the military profession, military justice systems, civil-military interactions, and the framework and formulation of defense policy. Communicative skills are developed. Leadership laboratory required.

# Amy ROTC

## MILITARY SCIENCE

### 1600:

- 100 INTRODUCTION TO MILITARY SCIENCE I** 2 credits  
A study of the mission of the Army, a geographical and cultural examination of the countries where U.S. soldiers are located, the principles of basic military leadership and management, land navigation, and opportunities in the Army. Leadership laboratory required. No military obligation incurred.
- 101 INTRODUCTION TO MILITARY SCIENCE II** 2 credits  
A study of the principles and techniques of military leadership and human resource management and an analysis of U.S. and Soviet military power. Leadership laboratory required. No military obligation incurred.
- 200 BASIC MILITARY LEADERSHIP** 2 credits  
Study of the principles of war and military strategy integrated into a military history program. Leadership laboratory required. No military obligation incurred.
- 201 SMALL UNIT OPERATIONS** 2 credits  
Study and application of the Leadership Assessment Program (LAP). Introduction to tactics, first aid, and basic military skills. Leadership laboratory required. No military obligation incurred.
- 300 ADVANCED LEADERSHIP I** 3 credits  
Prerequisites: 100, 101, 200, 201 and/or permission. Study in the application of military tactics and equipment. Practical work with communications equipment. Leadership laboratory required.
- 301 ADVANCED LEADERSHIP II** 3 credits  
Prerequisite: 300 or permission. Study of leadership and tactics at the small-unit level. Practical work with land navigation. Leadership laboratory required.
- 400 MILITARY MANAGEMENT I** 3 credits  
Prerequisites: 300, 301, or permission. Intensive investigation of the leadership process to include applicatory work emphasizing officer ethics, duties, and responsibilities. Leadership laboratory required.
- 401 MILITARY MANAGEMENT II** 3 credits  
Prerequisites: 300, 301, or permission. Study of officer leadership and managerial responsibilities. Study of Army command organization and procedures, training management, personnel system, Uniform Code of Military Justice, and continued emphasis on counseling and human relations. Leadership laboratory required.
- 400 SPECIAL TOPICS IN MILITARY SCIENCE** 1-3 credits  
(May be repeated for a maximum of six credits) Prerequisite: permission. Content varies with special topics. Texts to be selected according to topic and will use relevant library periodicals and journals. Existing library resources are adequate to support the course.

# Interdisciplinary Programs

## HONORS PROGRAM

### 1870:

- 250 HONORS COLLOQUIUM: HUMANITIES** 2 credits  
Prerequisite: admission to University Honors Program. Interdisciplinary colloquium on important issues in humanities.
- 360 HONORS COLLOQUIUM: SOCIAL SCIENCES** 2 credits  
Prerequisite: admission to University Honors Program. Interdisciplinary colloquium on important issues in social sciences.
- 470 HONORS COLLOQUIUM: NATURAL SCIENCES** 2 credits  
Prerequisite: admission to University Honors Program. Interdisciplinary colloquium on important issues in natural sciences.

## MEDICAL STUDIES

### 1880:

- 201 MEDICAL SEMINAR AND PRACTICUM I** 3 credits  
Prerequisites: 3100:191 and permission. Provides field experiences in health-care delivery in geographic area served by Northeastern Ohio Universities College of Medicine and The University of Akron. Student directed in supervised roles of professional and paraprofessional in meeting health-care needs of community. Open to first-year student in Phase 1 of B.S./M.D. program, others by permission.
- 301 MEDICAL SEMINAR AND PRACTICUM II** 1-3 credits  
(May be repeated to a maximum of three credits) Prerequisites: 201 and permission. Continuation of 201 offered at an advanced level of professional involvement. Open to second-year student in Phase 1 of B.S./M.D. program, others by permission.
- 310 MEDICINE AND THE HUMANITIES** 3 credits  
Medical history, literature, and ethics from the perspective of the Humanities, with readings from original sources and literary works on medical subjects.
- 401/501 SPECIAL TOPICS: MEDICAL EDUCATION** 1-3 credits  
(May be repeated with a change of topic with a maximum of three credits toward graduation.) Prerequisites: upper-college student status and permission. Selected topics on medical education offered by professionals. Intended to provide advanced undergraduate education and continuing education for student and practitioners in the health sciences.

# Community and Technical College

## COOPERATIVE EDUCATION

### 2000:

- 201.301 COOPERATIVE EDUCATION** 0 credits  
(May be repeated) Prerequisite: cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

## ASSOCIATE STUDIES ENGLISH

### 2020:

- 121 ENGLISH** 4 credits  
English composition focused on considered thought and writing. Includes inventive writing, essay structure, consideration of strength and source of evidence, and study of various options for development.
- 222 TECHNICAL REPORT WRITING** 3 credits  
Prerequisite: 121, 1100:111 or equivalent. Prepares student to write the types of reports most often required of technicians, engineers, and scientists. Includes types of reports, memoranda, and letters; techniques of research, documentation and oral presentations.
- 224 WRITING FOR ADVERTISING** 4 credits  
Prerequisite: 121, 1100:111 or equivalent. Introduction to the copywriter's role in print advertising and collateral materials. Study of advertising language; practice in writing advertisements, brochures, sales letters. Includes writing for a portfolio.
- 290 SPECIAL TOPICS: ASSOCIATE STUDIES** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in associate studies.

## ASSOCIATE STUDIES MATHEMATICS

### 2030:

- 130 INTRODUCTION TO TECHNICAL MATHEMATICS** 3 credits  
Elements of basic algebra; operations on signed numbers and polynomials; solutions and applications of first- and second-degree equations; English and metric systems; various types of graphs with applications; linear systems; trigonometry of right triangle. May not be used to meet General Studies mathematics requirement.
- 151 ELEMENTS OF MATHEMATICS I** 2 credits  
Prerequisites: Two years of high school algebra and placement test. Fundamental concepts and operations, functions, graphs, factoring and algebraic fractions, variation, and quadratic equations.
- 152 ELEMENTS OF MATHEMATICS II** 2 credits  
Prerequisite: 151 or three years high school mathematics and placement test. Trigonometric functions, systems of linear equations, determinants, trigonometric functions of any angle, the straight line, radians, the  $\delta$ -operator.
- 153 ELEMENTS OF MATHEMATICS III** 2 credits  
Prerequisite: 152 or equivalent. Complex fractions, exponents and radicals, binomial theorem, exponential and logarithmic functions. Arithmetic and geometric sequences, series optional.
- 154 ELEMENTS OF MATH IV** 3 credits  
Prerequisite: 153 or equivalent. Graphs of trigonometric functions, complex numbers in polar form, trigonometric identities and equations, higher degree equations, analytic geometry of the straight line and conic sections.
- 161 MATHEMATICS FOR MODERN TECHNOLOGY** 4 credits  
Prerequisite: 151 or placement by adviser. Numeration systems. Analytical geometry of the straight line, linear system. Matrices and matrix methods, determinants. Sets and logic. Probability and statistics. Math of finance.
- 255 ELEMENTS OF CALCULUS** 3 credits  
Prerequisite: 154 or equivalent. The derivative, applications of the derivative, derivatives of the trigonometric, logarithmic, and exponential functions. Integration by antidifferentiation.
- 290 SPECIAL TOPICS: ASSOCIATE STUDIES MATHEMATICS** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in associate studies.

- 345 BASIC TECHNIQUES FOR DATA ANALYSIS** 2 credits  
Prerequisite: 154 or 161. Data summarization including graphic presentation, numerical measures, introduction to probability, confidence intervals and hypothesis testing. Computer usage incorporated. For Community and Technical College students only.

- 356 CALCULUS FOR TECHNICAL APPLICATIONS** 3 credits  
Prerequisite: 255 or equivalent. Methods and applications of integration, first and second order differential equations, series expansion, Laplace transforms, partial derivatives, and double integrals.

## ASSOCIATE STUDIES SOCIAL SCIENCES

### 2040:

- 240 HUMAN RELATIONS** 3 credits  
Examination of principles and methods which aid in understanding the individual's response to society and the relationship between society and individuals.
- 241 TECHNOLOGY AND HUMAN VALUES** 2 credits  
Examination of impact of scientific and technical change upon people, their values and institutional arrangements. Topics include biomedical technology, automation, economic growth, natural environment and technology and quality of life.
- 242 AMERICAN URBAN SOCIETY** 3 credits  
Multidisciplinary treatment of urban processes and problems. Concerns historical, political, social, economic and other environmental forces which impact the individual in an urban setting.
- 244 DEATH AND DYING** 2 credits  
Multidisciplinary approach to death and dying. Emphasis on coping with death and loss on the professional and personal levels.
- 247 SURVEY OF BASIC ECONOMICS** 3 credits  
Introduction to economic analysis and issues designed for the student taking only one course in economics. Coverage includes economic systems, exchange, money and banking, national income, employment, fiscal policy and current domestic economic problems.
- 251 HUMAN BEHAVIOR AT WORK** 3 credits  
Examination of relationship between human behavior and the work organization. Emphasis on how contemporary organizations are changing and what makes individuals within their organizations more effective.
- 254 THE BLACK AMERICAN** 2 credits  
Prerequisite: 2020:121 or 3300:112. Examination of the black American including origins, historical achievements and present striving to achieve first-class citizenship in American society. Emphasis on analysis of forces in American society that create racial separation.
- 290 SPECIAL TOPICS: ASSOCIATE STUDIES SOCIAL SCIENCES** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in the social sciences.

## INDIVIDUALIZED STUDY

### 2100:

- 190 INDIVIDUALIZED STUDY EVALUATION** 1 credit  
Prerequisite: admission to program. A continuing assessment of the student's progress and program. Enrollment required during first semester in the Individualized Study Program.

## EDUCATIONAL TECHNOLOGY

### 2200:

- 100 INTRODUCTION TO LIBRARY TECHNOLOGY** 3 credits  
Introduces student to library technology program and career opportunities available as library technologists. Includes discussions, field observations, guest speakers, lectures, readings, and extensive practical hands-on experience.
- 201 CATALOGING, CLASSIFYING AND PROCESSING MATERIALS** 3 credits  
Study of principles of descriptive cataloging, Dewey decimal system, Library of Congress classifications and subject headings. Problems, practice in typing catalog cards and filing.
- 202 ORGANIZING AND OPERATING LIBRARY/MEDIA CENTERS** 3 credits  
Includes functional aspects of facility, ordering and processing materials, circulation procedures and other control systems. Operational functions include program development and implementation, services of library/media centers and public relations.
- 203 MATERIALS SELECTION** 2 credits  
Introduction to tools used in selecting print and nonprint materials for libraries/media centers. Problems of censorship, intellectual freedom and academic freedom discussed as they relate to evaluation selection process.
- 204 REFERENCE PROCEDURES** 3 credits  
Introduction to study and use of basic information tools including almanacs, encyclopedias, dictionaries, bibliographies, yearbooks and specialized reference tools. Actual reference practices and procedures used.
- 205 INFORMATION RETRIEVAL SYSTEMS IN LIBRARY TECHNOLOGY** 3 credits  
Prerequisites: 201,204; or permission. Practical introduction to information retrieval systems and their application. Emphasis on Ohio College Library Center network and its impact on library technical and public services. Hands-on experience with OCLC and other on-line terminal operations.

- 245 INFANT/TODDLER DAY-CARE PROGRAMS** 3 credits  
Survey of infant/toddler development. Principles of infant/toddler care giving. Design of environment and curriculum based on child's needs. Includes observation of children. (20 field hours required)
- 250 OBSERVING AND RECORDING CHILDREN'S BEHAVIOR** 3 credits  
Prerequisite: 7400:265 or permission. Develops observing and recording skills using different types of records and assesses children's development and behavior. (23 field hours required)
- 290 SPECIAL TOPICS: EDUCATIONAL TECHNOLOGY** 1-3 credits  
Prerequisite: permission. Selected topics on subject areas of interest in educational technology.
- 297 INDEPENDENT STUDY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Selected topics and special areas of study under supervision and evaluation of selected faculty member with whom specific arrangements have been made.

## AMERICAN SIGN LANGUAGE INTERPRETING AND TRANSLITERATING TECHNOLOGY

### 2210:

- 111 INTRODUCTION TO SIGN, DEAFNESS AND INTERPRETING SERVICES** 3 credits  
An introduction to gesturing, American Sign Language, fingerspelling, the Deaf community, its culture and the use of interpreting services.
- 112 AMERICAN SIGN LANGUAGE I** 4 credits  
Beginning ASL interpersonal communication skills will be introduced through a functional-notional approach.
- 114 AMERICAN SIGN LANGUAGE SEMANTICS AND STRUCTURE I** 3 credits  
Prerequisite or corequisite: 112. Vocabularies and grammatical skills are developed through targeted sets of lexicons and structures in ASL.
- 122 AMERICAN SIGN LANGUAGE II** 4 credits  
Prerequisite: Admission; 114. Advanced beginning ASL interpersonal communication skills will be continued through a functional-notional approach.
- 124 AMERICAN SIGN LANGUAGE SEMANTICS AND STRUCTURE II** 3 credits  
Prerequisite or corequisite: 122. Further development of vocabularies and grammatical skills through targeted sets of lexicons and structures in ASL.
- 126 ADVANCED FINGERSPELLING AND NUMBERS** 2 credits  
Prerequisite: 114. Advanced fingerspelling and number skills. Focus will be on increasing accuracy, clarity, speed and rhythm in the application of comprehensive and production skills.
- 128 THE PROFESSION OF INTERPRETING** 3 credits  
Prerequisite: 111. A working knowledge of interpreting, including its history, interpreting service models, ethical issues, and overview of settings for interpretation.
- 232 AMERICAN SIGN LANGUAGE III** 4 credits  
Prerequisite: 124. Designed to provide students with an intermediate level of study and application of American Sign Language grammar/syntax, idiomatic expressions, and colloquialisms.
- 234 TRANSLATIONS/INTERPRETING SKILLS: ENGLISH AND ASL** 4 credits  
Prerequisite or corequisite: 232; corequisite: 236, required. A progression of developing intralingual skills in ASL and English from translations to introducing cognitive multi-tasking interpreting skills.
- 236 CONSECUTIVE INTERPRETING** 4 credits  
Corequisite: 234, required. Consecutive interpretations of prepared and spontaneous texts from a progression of interpreting with substantial delays to immediate reconstruction at completion of the source message in the target language.
- 238 AMERICAN DEAF CULTURE** 3 credits  
Prerequisite: 111. The culture of American Deaf communities, the roles and impact of sociolinguistic factors and oppression will be covered.
- 242 AMERICAN SIGN LANGUAGE IV** 4 credits  
Prerequisite: 236. Designed to provide students with an advanced level of study and application of American Sign Language grammar/syntax, idiomatic expressions, and colloquialisms.
- 244 SIMULTANEOUS INTERPRETING** 4 credits  
Prerequisite or corequisite: 242. Focus is on simultaneous multi-cognitive tasking skills with minimum time lag from the source message to target language.
- 246 THE INTERPRETER IN THE EDUCATIONAL SETTING** 3 credits  
Prerequisite or corequisite: 244. A working knowledge of interpreting/transliterating in the educational setting with application of manual code systems and technical vocabularies.
- 248 INTERPRETING PRACTICUM I** 2 credits  
Prerequisite or corequisite: 246. Provides the opportunity to integrate skills and knowledge through actual interpreting/transliterating in selected and controlled situations. Includes special communicative techniques with deaf consumers.
- 252 INTERPRETING PRACTICUM II** 3 credits  
Prerequisite: 248; corequisite: 254, required. This course provides the opportunity to integrate skills and knowledge through actual interpreting in a variety of practicum settings.
- 254 APPLIED SITUATIONAL INTERPRETING** 4 credits  
Corequisite: 252, required. Professional interpreting issues, application of situational interpreting skills and individual preparation and feedback for certification.

- 290 SPECIAL TOPICS: AMERICAN SIGN LANGUAGE INTERPRETING AND TRANSLITERATING TECHNOLOGY** 1-5 credits  
Selected topics on subject areas of interest in American Sign Language Interpreting and Transliterating Technology.

## CRIMINAL JUSTICE TECHNOLOGY

### 2220:

- 100 INTRODUCTION TO CRIMINAL JUSTICE** 3 credits  
Overview of criminal justice system, its history, development and evolution within the United States including subsystems of police, courts, corrections. Constitutional limitations, current criminal justice practices human relations, professionalization, prevention.
- 101 INTRODUCTION TO SECURITY** 4 credits  
Overview of functions, problems and strategies of contract and proprietary security agencies. Philosophy of the protection of assets based on risk analysis and cost effectiveness.
- 102 CRIMINAL LAW FOR POLICE** 3 credits  
Prerequisite: 100. Historical development and philosophy of the law. Thorough study of modern criminal law including Ohio Criminal Code and defenses to particular crimes.
- 104 EVIDENCE AND CRIMINAL LEGAL PROCESS** 3 credits  
Prerequisite: 100. Study of evidence law, constitutional perspectives and law enforcement officer's relationship thereto. Court procedures from arrest to incarceration.
- 106 JUVENILE JUSTICE PROCESS** 3 credits  
Prerequisite: 100. Examination of juvenile justice system, functions of its various components; adolescent subculture, legislation, causative factors, prevention and treatment methodologies and programs.
- 110 SOCIAL VALUES AND THE CRIMINAL JUSTICE PROCESS** 3 credits  
Prerequisite: 100. In-depth exploration stressing philosophy that social values and ethics are basic principles of a sound criminal justice process. Roles of administration of justice practitioners in relation to public they serve.
- 200 CRIMINAL JUSTICE THEORY AND PRACTICE** 3 credits  
Prerequisite: 100. Examination of criminal justice administrative problems in personnel selection, training, advancement and personnel utilization. Consolidation and cooperation between agencies. Advanced concepts for change within criminal justice system.
- 210 POLICE PATROL/TRAFFIC OPERATIONS** 3 credits  
Prerequisite: 100. Designed to meet peace officer certification requirements. Emphases placed on basic patrol procedures, traffic enforcement, traffic engineering, and traffic safety education.
- 212 TRAFFIC ACCIDENT INVESTIGATOR** 4 credits  
Prerequisite: OPOTC Certification. Traffic accident investigation basics with a further emphasis on technical aspects of investigation and follow-up.
- 222 INTERVIEW AND INTERROGATION** 3 credits  
Prerequisite: OPOTC Certification. A course of study on interview and interrogation which will teach the student how to obtain information in an orderly, effective, and legally sufficient manner.
- 240 VICE AND ORGANIZED CRIME** 3 credits  
Prerequisites: 100 and permission. Introduction to problems of vice crime and narcotics and drug abuse in our society. Provides knowledge concerning issues involved in consensual acts. Impact on society of physical and psychological results of substance abuse.
- 242 ORGANIZED CRIME/VICE CRIME** 3 credits  
Prerequisite: OPOTC Certification. Comprehensive examination of origins, forms, and histories of organized crime, gambling, prostitution, and substance abuse; with special emphasis on law enforcement efforts and methods.
- 250 CRIMINAL CASE MANAGEMENT** 6 credits  
Prerequisites: 100, 2840:100 and permission. Reconstruction of chronological sequence of a crime including searching, collection, preserving and evaluation of physical and oral evidence. Scientific approach to criminal investigation.
- 252 ADVANCED CRIMINAL CASE MANAGEMENT** 4 credits  
Prerequisite: OPOTC Certification. Designed to meet the in-service police officer/investigators need to understand new/updated technology and approaches in managing criminal cases.
- 282 POLICE ADMINISTRATION** 3 credits  
Prerequisite: OPOTC Certification. Approaches to police administration from an overview perspective providing the fundamentals of administration and management while giving the law enforcement student a framework for understanding.
- 290 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 291 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits). Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 292 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits). Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 293 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits). Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

**294 CRIMINAL JUSTICE INTERNSHIP EVALUATION** 1 credit  
Prerequisites: 100. Thirty credits and permission; corequisite: 295. Analysis by student and instructor of internship experience. A sharing of knowledge gained by student during internships.

**295 CRIMINAL JUSTICE INTERNSHIP** 3 credits  
Prerequisites: 100. Thirty credits and permission. Supervised work experience in criminal justice agency for purpose of increasing student understanding of criminal justice process.

**296 CURRENT TOPICS IN CRIMINAL JUSTICE** 3 credits  
A variety of course topics on current subjects relative to law enforcement and the Criminal Justice System.

## FIRE PROTECTION TECHNOLOGY

### 2230:

**100 INTRODUCTION TO FIRE PROTECTION** 3 credits  
History and philosophy of fire protection; introduction to agencies involved; current legislative developments; discussion of current related problems, expanding future of fire protection and career orientation.

**102 FIRE SAFETY IN BUILDING DESIGN AND CONSTRUCTION** 3 credits  
Exploration of building construction and design with emphasis on fire protection concerns; review of related statutory and suggested guidelines local, state and national scope.

**104 FIRE INVESTIGATION METHODS** 3 credits  
History of fire investigation; gathering of evidence and development of technical reports; fundamentals of arson investigation; processing of criminal evidence and procedures related to local and state statutes.

**153 PRINCIPLES OF FIRE PROTECTION AND LIFE SAFETY** 3 credits  
Recognition of specialized fire hazards. Maintenance and utilization of portable and automatic fire extinguishing devices. Fire prevention methods, code compliance. Organizing fire safety training programs.

**202 FIRE SUPPRESSION AND EMERGENCY RESPONSE METHODS** 3 credits  
Efficient and effective utilization of human resources, equipment and apparatus. Emphasis on preplanning, fireground organization problem solving related to fireground decision making and attack tactics and strategy.

**204 FIRE HAZARDS RECOGNITION** 3 credits  
Inspection techniques and procedures; setting up a fire prevention bureau. Recognition and correction of fire hazards. Public relations and code enforcement.

**205 FIRE DETECTION AND SUPPRESSION SYSTEMS I** 3 credits  
Design, installation, maintenance and utilization of portable fire extinguishing appliances and preengineered automatic systems; fire detection and alarm signaling systems operational capabilities, requirements.

**206 FIRE DETECTION AND SUPPRESSION SYSTEMS II** 3 credits  
Prerequisite: 205. Design, installation and operation of automatic fire suppression systems. Includes sprinkler, foam, carbon dioxide, dry chemical, halogenated agent systems.

**250 HAZARDOUS MATERIALS** 4 credits  
Prerequisite: 2940:100. Study of chemical characteristics and reactions related to storage, transportation and handling of hazardous materials. Emphasis on emergency situations, fire fighting and control.

**254 FIRE CODES AND STANDARDS** 3 credits  
Prerequisite: 104. Study of legal rights and duties, liabilities and responsibilities of fire department organizations.

**257 FIRE PROTECTION FOR BUSINESS AND INDUSTRY** 3 credits  
Industrial fire protection problems including specialized hazards, automatic extinguishing systems, codes and standards, fire safety planning, fire brigade organizations.

**280 FIRE SERVICE ADMINISTRATION** 4 credits  
Prerequisites: 100. Fire officer professional qualifications; federal, state regulations governing department operations—OSHA, EPA; emergency and non-emergency operations procedures—ICS, IMS, Emergency Operations Center are presented.

**290 SPECIAL TOPICS: FIRE PROTECTION TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in fire protection technology.

**295 FIRE PROTECTION INTERNSHIP** 4 credits  
Prerequisites: 30 credits in program and permission of program coordinator. Supervised work experience in fire protection to increase student understanding of fire technology; analysis by student and instructor of internship experience; sharing of knowledge gained during internship.

## COMMERCIAL ART (Inactive)

### 2240:

**124 DESIGN IN COMMERCIAL ART** 3 credits  
Projects in visual design fundamentals. Analysis of design/research process applied to advertising layout and composition. Design constructions in pattern and self-contained forms.

**130 MARKER RENDERING** 3 credits  
Prerequisites: 124, 7100:131, 7100:132. Teaches drawing and rendering skills using markers and common visual languages necessary for communication with design professionals. Projects on various papers for comprehensive studio knowledge.

**140 TYPOGRAPHY AND LETTERING** 3 credits  
Prerequisite: 124. Letter symbols studied in terms of communication and aesthetic design. History of letter forms, type indication, copyfitting and type specification for commercial application. Analysis of contemporary typefaces.

**242 ADVERTISING LAYOUT DESIGN** 3 credits  
Prerequisite: 130 and 140. Problems in commercial graphic design, analysis, research, visual experimentation and finished art. Emphasis on visual problem solving in advertising and communications.

**245 DESIGNING FOR PRODUCTION** 3 credits  
Prerequisites: 140, 7100:132. Analysis of design process as applied to commercial printing processes. Design projects taken to camera-ready art. Color separation systems, key-line, mechanicals and preparation of finished art procedures.

**247 PACKAGING DESIGN** 3 credits  
Prerequisites: 242 and 245. Visual design and development of protective devices for packaging, shipment and display of consumer products. Analysis of product marketing potential and point-of-purchase advertising.

**248 PUBLICATION DESIGN** 3 credits  
Prerequisites: 242, 245 and 122. Study of publications and design of promotional brochures, annual reports and other multi-paged communication devices. Emphasis on total design systems from concept to camera-ready art. Portfolio development.

**250 ADVANCED COMMERCIAL PHOTOGRAPHY** 3 credits  
Prerequisites: 210 and 224. Students explore advanced techniques within a commercial photography specialty of their choice while producing photographs for a commercially oriented portfolio.

**252 PROFESSIONAL PHOTOGRAPHIC PRACTICES** 3 credits  
Prerequisites: 210 and 224. Students confront the business and marketing practices unique to the commercial photography industry while producing a photographically oriented self-promotional campaign.

**290 SPECIAL TOPICS: COMMERCIAL ART** 1-3 credits  
Prerequisite: permission of instructor. Selected topics or subject areas of interest in commercial art.

**295 PRACTICUM IN COMMERCIAL ART** 1-3 credits  
(Repeatable for a maximum of nine hours.) Prerequisite: 7100:231, 232, 233. Controlled by portfolio competition or permission of the instructor. Provides experience through an internal design and production studio. Involves responsibilities for the design and production of communication materials. Includes organizational, accounting and managerial responsibilities.

## PUBLIC SERVICE TECHNOLOGY

### 2250:

**260 ADMINISTRATION AND SUPERVISION IN THE PUBLIC SERVICE** 3 credits  
Prerequisite: 2220:100 or 2230:100. Examination and analysis of basic concepts of administration, supervision, policy formulation as they pertain to public service agencies. Practical application of supervisory responsibilities. THIS COURSE IS CURRENTLY INACTIVE.

## COMMUNITY SERVICES TECHNOLOGY

### 2260:

**100 INTRODUCTION TO COMMUNITY SERVICES** 3 credits  
Introductory course to familiarize student with role of community services technician in service delivery. Use, history and rationale for paraprofessionals, programs, volunteer experiences, self-awareness, and interaction in community services. Students are required to do 105 hours of volunteer work.

**150 INTRODUCTION TO GERONTOLOGICAL SERVICES** 3 credits  
Basic orientation to gerontology and role of community service technician in service delivery to aged. Topics include social, biological, economical, and psychological aspects of aging; national and state legislation; services and service provider.

**230 COMMUNITY-BASED RESIDENTIAL SERVICES** 3 credits  
Orientation to community-based residential services and role of community services technician in delivery of services to mentally disabled. Includes historical, social and legal forces in community-based services and practical aspects of operation of a residential facility.

- 232 ADVOCACY FOR THE DISABLED** 3 credits  
Working with disabled individuals. Includes legal rights, advocacy roles, civil commitment, guardianship, housing, employment, and health-care needs.
- 240 CHEMICAL DEPENDENCY** 3 credits  
Basic introduction to drug use and abuse. Includes pharmacology, basic helping and crisis intervention skills, motivations, theories of treatment, and exploration of some typical drug crisis situations.
- 241 CHEMICAL DEPENDENCY II** 3 credits  
Prerequisite: 240 or permission. Continued in-depth exploration of drug usage patterns, causes of chemical abuse and treatment modalities. Skills to develop alternatives to drug abuse are studied and rehearsed.
- 251 COMMUNITY SERVICES FOR SENIOR CITIZENS** 3 credits  
Prerequisite: 150. A study of national and community resources for social service delivery to senior citizens. Specific agencies, program needs and senior citizens and resultant services.
- 252 RESIDENT ACTIVITY COORDINATION** 3 credits  
Designed to prepare student to qualify as resident activity coordinator in Ohio nursing homes. General topics include: assessing and understanding the patient, administration of activities program and techniques of program planning.
- 260 ALCOHOL USE AND ABUSE** 3 credits  
Survey of use and abuse of alcohol in our society with particular emphasis on replacing common stereotypes, myths and attitudes with improved understanding.
- 261 ALCOHOLISM TREATMENT** 3 credits  
Prerequisite: 260. Survey of theory and practices in treatment of alcohol problems. Special emphasis on applicability and effectiveness of various resources and approaches.
- 262 BASIC HELPING SKILLS IN ALCOHOL PROBLEMS** 4 credits  
Prerequisite: 278. Introduces the student to basic concepts of helping skills; provides opportunity to help; develops ability to give and receive feedback about relevancy and effectiveness of behavior; develops responsibility for their own learning as related to working with alcohol problems.
- 263 GROUP PRINCIPLES IN ALCOHOLISM** 4 credits  
Prerequisite: 260. Introduces student to group dynamics; provides opportunity to examine their role as group members; and explores unique factors in alcoholism that influence group treatment. Practical group dynamics sessions.
- 264 CHILDREN OF ALCOHOLICS** 3 credits  
A didactic and experiential indepth study of the characteristics, behaviors, problems, and programs of recovery of children and adults who have lived in an alcoholic home.
- 265 WOMEN AND CHEMICAL DEPENDENCY** 3 credits  
Exploration of social, psychological, physical, and family consequences as contributing factors in the misuse of alcohol and drugs by women.
- 277 CASE MANAGEMENT IN COMMUNITY SERVICES** 3 credits  
Case by case study of Social Service delivery in six primary areas of Human Services. Emphasis on case management skills, documentation and ethics.
- 278 TECHNIQUES OF COMMUNITY WORK** 4 credits  
Prerequisites: 100 and 2020:121. For those intending to work in community organizations in the United States and for others desiring an understanding of technical community service roles. Covers such topics as ethics, liability issues, communication and problem solving skills, values clarification, stress management systems theory, and assertive behavior.
- 279 TECHNICAL EXPERIENCE IN COMMUNITY AND SOCIAL SERVICES** 5 credits  
Prerequisite: 278 and permission. Individual placement in selected community and social service agencies for educationally supervised experience in community and social services technician position. Does not substitute for 7750:421 or 495.
- 280 FUNDAMENTALS OF VOLUNTEER MANAGEMENT** 3 credits  
Prerequisite: permission. For persons wishing to increase professional skills in volunteer administration. Includes setting goals, developing work plans, evaluating volunteer performance, recruiting volunteers, writing job descriptions, handling human relations problems, developing office procedures, keeping records, and evaluating volunteer program.
- 281 RECRUITMENT AND INTERVIEWING OF VOLUNTEERS** 3 credits  
Prerequisite: 280 or permission. To provide knowledge for recruitment and interviewing of persons seeking volunteer positions. Will cover writing of volunteer job descriptions, methods of recruitment, techniques of interviewing; concentration on interviewing skills.
- 285 SOCIAL SERVICES PRACTICUM** 1-4 credits
- 286 COUNSELOR ASSISTANT INTERNSHIP** 4 credits  
Prerequisites: 279 and permission of instructor. Integrates counselor assistant experience with fundamental concepts and skills from academic studies. Students required to complete 200 hours of supervised field experience.
- 288 TECHNIQUES OF COMMUNITY WORK II** 4 credits
- 290 SPECIAL TOPICS: COMMUNITY SERVICES TECHNOLOGY** 1-3 credits  
Prerequisite: permission. Selected topics or subject areas of interest in community services technology.
- 294 SOCIAL SERVICES PRACTICES SEMINAR** 1-2 credits
- 297 INDEPENDENT STUDY** 1-3 credits  
Prerequisite: permission. Selected topics and special areas of study under the supervision and evaluation of a selected faculty member with whom specific arrangements have been made.

## LABOR STUDIES (INACTIVE)

### 2270:

- 101 INTRODUCTION TO LABOR STUDIES** 3 credits  
Overview of Trade Unionism in America from 18th Century to present with emphasis on factors affecting growth of unions. Rise of industrial unionism as alternative to craft unions. Trade union movements in other countries examined for their influence on American unions.
- 111 COLLECTIVE BARGAINING I** 3 credits  
Review of collective bargaining dealing with wages, fringes and working conditions. Examination of contract content. Development of bargaining proposals. Skills required in negotiations and union/management responsibilities to community in collective bargaining. Strikes and impasse resolution.
- 122 LEGAL FRAMEWORK FOR COLLECTIVE BARGAINING** 3 credits  
Legal framework within which collective bargaining process takes place. Rights of employees, union and employer under federal and state laws discussed in context of organizing, election and bargaining.
- 123 LABOR LEGISLATION AND ECONOMIC SECURITY** 3 credits  
Prerequisite: 122 or permission. Federal and state legislation governing employment conditions and standards. Includes minimum wage, health and safety, unemployment compensation, TDI, civil rights and anti-discrimination, social security, labor management reporting and disclosure.
- 212 COLLECTIVE BARGAINING II** 3 credits  
Prerequisite: 111. Mechanics and skills of formal grievance procedures in industrial, craft and public setting. Investigation, record keeping and presentation of grievance, as well as study of arbitration process and preparation and presentation of arbitration cases.
- 221 OCCUPATIONAL HEALTH AND SAFETY STANDARDS** 3 credits  
Prerequisite: 122. Examination of William/Steiger Occupational Safety and Health Act and rights and responsibilities conferred on unions by this act. Includes not only workings of the law but also hazards recognition study.
- 224 LABOR LAW IN THE PUBLIC SECTOR** 3 credits  
Prerequisite: 271. Provides basic understanding of legal requirements and restraints placed upon parties when bargaining within federal, state and local sectors as well as postal and educational areas. Legal framework of collective negotiations or contract administration.
- 231 FAIR PRACTICES AND EQUAL OPPORTUNITY** 2 credits  
Prerequisite: 101. Rights and responsibilities of unions and union members as related to Title VII of the Civil Rights Act, the Voting Rights Act and development of EEOC.
- 241 UNION LEADERSHIP** 2 credits  
Prerequisite: 101. Specific skills related to administration of local unions structure and duties and responsibility of officers.
- 251 PROBLEMS IN LABOR STUDIES** 3 credits  
Prerequisite: final semester or permission. Each student required to combine field research and classroom time to identify, explore and propose an approach to a current problem in labor/management relations.
- 261 WAGE ADMINISTRATION** 3 credits  
Prerequisites: 101, 111 or 122. Wage and salary determination: structure of wages, salaries and fringe benefits and use of merit and incentive plans. Methods of compensation analyzed. Impact of federal and state laws governing the payment of wages.
- 271 PUBLIC SECTOR LABOR RELATIONS** 3 credits  
Prerequisite: 101. Analyzes current problems, developments and issues in public sector collective bargaining from growth of public employee unions to the nature of bargaining in the public sector. Includes bargaining issues, right-to-strike and use of arbitration in public sector.
- 290 SPECIAL TOPICS: LABOR STUDIES** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or workshops in labor studies.

## HOSPITALITY MANAGEMENT

### 2280:

- 120 SAFETY AND SANITATION** 3 credits  
Introduction to food service sanitation, safety practices pertinent to hospitality manager. Emphasis on sanitation laws, rules, food microbiology, safe food handling, storage practices, accident prevention.
- 121 FUNDAMENTALS OF FOOD PREPARATION I** 4 credits  
Skills and basic knowledge of food preparation procedures in a laboratory situation.
- 122 FUNDAMENTALS OF FOOD PREPARATION II** 4 credits  
Prerequisites: 120 and 121. Continuation of 121. Food preparation techniques presented in laboratory situations for public consumption in a restaurant setting.
- 123 MEAT TECHNOLOGY** 2 credits  
Prerequisite: 120. Intensive examination of meat cutting, portioning, determining product yield, and calculating cost.
- 135 MENU PLANNING AND PURCHASING** 3 credits  
Principles of food purchasing procedures including policies, writing specifications, recognizing quality standards integrated with marketing techniques, menu merchandising, menu planning.
- 160 HOTEL/MOTEL FRONT OFFICE PROCEDURES** 3 credits  
Prepares student for entry-level positions in the hotel/motel industry. Basic principles of guest service, standard systems, techniques within hotel/motel industry.

- 152 MAINTENANCE AND ENGINEERING FOR HOTELS AND MOTELS** 3 credits  
Familiarization with organization, terms, concepts, responsibilities common to engineering and building maintenance.
- 160 WINE AND BEVERAGE SERVICE** 3 credits  
Intensive examination of wine as related to hospitality industry. Emphasis on business practices. History and development of viticulture, enology.
- 232 DINING ROOM SERVICE AND TRAINING** 2 credits  
In-depth study of the styles of dining service, development of job descriptions, importance of courtesy, customer relations.
- 233 RESTAURANT OPERATIONS AND MANAGEMENT** 4 credits  
Prerequisite: 122, and 232 for restaurant management option. Additional prerequisites: 261 and 262 for culinary arts majors. Introduction to large quantity food service procedures with emphasis on sound principles of food handling service and sanitation in large quantity operations. Gourmet meals served in simulated restaurant atmosphere.
- 237 INTERNSHIP** 1 credit  
Prerequisite: permission. On/off campus observation/work experience integrated with academic instruction. Concepts applied to practical situations. May be repeated for a total of two credits.
- 238 COST CONTROL PROCEDURES** 3 credits  
Prerequisite: 2420:170 and 2280:135. Methods of financial control of an operation are presented and discussed with case study exercises. Hands-on experience with NCR 2160 Computer System.
- 240 SYSTEMS MANAGEMENT AND PERSONNEL** 3 credits  
Identifies systems utilized in successful food service operations. General principles of each system, its interrelationships with total food service organization explored.
- 243 FOOD EQUIPMENT AND PLANT OPERATIONS** 3 credits  
Prerequisite: 120. Available food service equipment, its selection, use and care. Field trips taken to wholesale outlets and food service establishments to see food service equipment demonstrated and in operation.
- 254 HOTEL/MOTEL HOUSING MANAGEMENT** 3 credits  
Analysis of housekeeping procedures; organization of successful housekeeping department.
- 255 HOTEL/MOTEL SALES PROMOTION** 3 credits  
Sales promotion techniques; functioning of sales department; need for sales planning. Sales tools, selling techniques for food and beverage, group business. Advertising, community relations and internal personal and telephone selling.
- 256 HOSPITALITY LAW** 3 credits  
Introduction to hotel, restaurant, travel law. Fundamental constitutional, statutory, administrative rules, regulations applicable to hospitality industry. Case study, problem-solving approaches applied to legal problems confronting hospitality executives.
- 261 BAKING AND CLASSICAL DESSERTS** 3 credits  
Prerequisite: 122. Production of basic items in bakeshop; use of equipment, materials, cost control to produce the desired products.
- 262 CLASSICAL CUISINE** 3 credits  
Prerequisites: 122, 123. Lecture-demonstration experience in preparation of traditional American hotel cuisine. Includes traditional repertoire of foods, spirits. Application of kitchen production controls; menu planning.
- 263 INTERNATIONAL FOODS** 2 credits  
Prerequisite: 122. Lecture-demonstration laboratory experience in preparing foods of different nationalities. Demonstration, preparation of select foods by visiting chefs. Recipe file developed.
- 265 BEVERAGE OPERATIONS** 3 credits  
Purchasing, inventory control, and accounting of alcoholic beverage service used in the hospitality industry. Review of local, state and federal beverage regulations.
- 290 SPECIAL TOPICS: HOSPITALITY MANAGEMENT** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in food service management.
- 299 WORKSHOP** 1-5 credits  
Workshops offered to meet community training needs.

## LEGAL ASSISTING

### 2290:

- 101 INTRODUCTION TO LEGAL ASSISTING** 3 credits  
Covers the basics of legal assisting emphasizing the fundamental concepts of the legal system. Includes overview of legal assistant career and ethical considerations relative thereto.
- 104 BASIC LEGAL RESEARCH AND WRITING** 3 credits  
Prerequisite: 101. Will provide the student with basic research abilities necessary in law offices. Includes the use of law library tools (reporter systems, legal encyclopedias, codes, and computer).
- 106 BUSINESS ASSOCIATIONS** 3 credits  
Prerequisite: 101. Instructs students in different types of business entities, from sole proprietorships to corporations. Preparation of forms and necessary governmental filings will be stressed.
- 108 REAL ESTATE TRANSACTIONS** 3 credits  
Prerequisite: 101. Acquaints students with basic real property law, including different types of deeds, ownerships, easements, and mortgages. Problems arising from sales agreements will be covered.
- 110 TORT LAW** 3 credits  
Prerequisite: 101. Covers the traditional civil wrongs, from the plaintiff's and defendant's standpoints. Actual cases will be briefed and discussed. Stresses importance of preparation prior to trial.

- 112 FAMILY LAW** 3 credits  
Prerequisite: 101. Covers divorce and dissolution of marriage including child support, custody, alimony, etc. Client interviewing is stressed. Juvenile court procedures are covered, including neglect and abuse.
- 118 PROBATE ADMINISTRATION** 4 credits  
Prerequisite: 101. Covers law necessary to draft and interpret wills, trusts. Includes administration of a typical estate within Probate Court. Touches on guardianships, commitment of mentally ill.
- 204 ADVANCED LEGAL RESEARCH** 3 credits  
Prerequisite: 101; 104. Continuation of 104. Will especially stress importance of clear, concise legal writing. Students will write briefs, motions, and complaints as part of their endeavor.
- 214 CIVIL PROCEDURE** 3 credits  
Prerequisite: 101. Covers aspects of legal assisting in different types of civil litigation. Includes Ohio Rules of Civil Procedure, preparation of complaints, answers, motions, basic trial preparation.
- 216 DEBTOR-CREDITOR RELATIONS** 3 credits  
Prerequisite: 101. Course covers bankruptcy, collection methods, consumer law, and credit. Course stresses law and procedures and the numerous forms that are part of this practice.
- 218 ADVANCED PROBATE ADMINISTRATION** 3 credits  
Prerequisite: 101; 118. This is a continuation of 118 but will cover the more complicated trusts and estates and will stress both state and federal tax filings.
- 220 LEGAL ASSISTING INTERNSHIP** 4 credits  
Prerequisite: 101; Student must have completed all first-year courses. Gives students experience in law or law-related office. Students work 14 hours per week in their placement and meet regularly with the Internship Coordinator.

## COMMERCIAL PHOTOGRAPHY (Inactive)

### 2300:

- 122 INTRODUCTION TO COMMERCIAL PHOTOGRAPHY** 3 credits  
Prerequisite: 7100:275. While working through a series of advertising-related photographic projects, students are introduced to the numerous commercial applications of studio and location photography.
- 160 PORTRAIT/FASHION PHOTOGRAPHY** 3 credits  
Prerequisite: 122 and 7100:275. The fundamentals of commercial portraiture and fashion photography are explored through the study of styling, posing, lighting, and working with people.
- 170 ILLUSTRATION/ADVERTISING PHOTOGRAPHY** 3 credits  
Prerequisite: 122. Professionally oriented photographic skills are further developed as students confront assignments closely related to current trends in illustration and advertising photography.
- 230 MULTI-IMAGE PRODUCTION** 3 credits  
Prerequisites: 160, 170, portfolio review. Students explore the equipment, techniques, and applications of multi-image presentations while producing a synchronized multi-projector A-V show.
- 240 COMMERCIAL PHOTOGRAPHY PRACTICUM** 3 credits  
Prerequisites: 160, 170, and portfolio review. Supervised work experience in commercial photography studio or lab to increase student understanding of commercial photography industry.
- 241 COMMERCIAL PHOTOGRAPHY PRACTICUM EVALUATION** 1 credit  
Prerequisites: 160, 170, and portfolio review. The student and instructor analyses of the practicum experience in commercial photography studio or lab.
- 250 ADVANCED COMMERCIAL PHOTOGRAPHY** 3 credits  
Prerequisites: 160, 170 and portfolio review. Exploration of advanced techniques including specialty lighting, special effects, industrial/corporate and architectural photography. Emphasis on developing personal style and professional quality images.
- 260 PROFESSIONAL PHOTOGRAPHIC PRACTICES** 3 credits  
Prerequisites: 160 and 170. Students confront the business and marketing practices unique to the commercial photography industry while producing a photographically oriented self-promotional campaign.
- 270 COMMERCIAL PHOTOGRAPHY PORTFOLIO** 1 credit  
Prerequisites: 230 and 250. Professional portfolio presentation techniques are explored and developed in preparation for seeking employment. Final portfolio presentations must pass a portfolio review.
- 290 SPECIAL TOPICS: COMMERCIAL PHOTOGRAPHY** 1-3 credits  
Prerequisite: permission of instructor. Selected topics or subject areas of interest in commercial photography.

# BUSINESS MANAGEMENT TECHNOLOGY

## 2420:

- 101 ELEMENTS OF DISTRIBUTION** 3 credits  
Study of basic principles and methods in distribution. Presentation of marketing process as it relates to consumer and industrial products. Emphasis on pricing, product, promotion, as well as distribution.
- 103 THE ROLE OF SUPERVISION IN MANAGEMENT** 3 credits  
Presentation of basic management techniques; motivation, planning, organizing, leading and controlling. Elements of group behavior, communication and employee compensation.
- 104 INTRODUCTION TO BUSINESS** 3 credits  
Survey course of business in its entirety including production, distribution, finance, control and personnel functions. Emphasis on descriptive materials, technical vocabulary and career opportunities and responsibilities in various business fields.
- 105 INTRODUCTION TO CREDIT UNIONS** 2 credits  
Credit union as financial institution. History, structure, duties of board of directors, advisory committees, financial counseling, lending and analysis, evaluation of financial statements.
- 111 PUBLIC RELATIONS** 2 credits  
Study of philosophy, techniques and ethics of the management function known as public relations. Defines variety of publics and methods of communication.
- 113 INTRODUCTION TO BANKING** 2 credits  
Covers fundamentals of banking in operational perspective. Emphasis on bank functions, types of accounts, relationship to depositors, loans, investments trust, safe deposit operations, internal and external control, public service obligations.
- 115 CREDIT UNION OPERATIONS** 2 credits  
Operations with emphasis on teller transactions, credit principles, services and loan policies, financial planning and counseling, delinquency control and collections, credit union law.
- 117 SMALL BUSINESS DEVELOPMENT** 3 credits  
Prerequisite: 104. Fundamentals of small business operations, emphasis on small business marketing.
- 118 SMALL BUSINESS MANAGEMENT AND OPERATIONS** 3 credits  
Prerequisite: 117. Designed to provide greater insight into the management and financial aspects of small business operations. Emphasis on small business management.
- 121 OFFICE MANAGEMENT** 3 credits  
Survey of office administration with emphasis on management and interaction of human resources and new office technologies including information collection, processing, storage and retrieval.
- 123 FEDERAL REGULATION OF BANKING** 2 credits  
Corequisite: 113. Study of agencies regulating banks, bank charters, bank reports and examinations, federal limitations on banking operations and regulation of bank expansion. Supervision of employees to conform with regulation.
- 125 PERSONAL FINANCIAL COUNSELING** 3 credits  
Family resource management; consumer decision making including consumer credit and family budget decisions, retirement planning, types of insurance, annuities and savings, consumer education, types and techniques of counseling.
- 170 BUSINESS MATHEMATICS** 3 credits  
Review of fundamentals of mathematics applicable to business, trade prices, retail pricing, interest and discounts, compound interest and annuities, consumer credit, payroll, income taxes, depreciation methods, financial statements and elementary statistics.
- 202 PERSONNEL PRACTICES** 3 credits  
Provides information necessary to develop policies and programs that attract, retain and motivate employees. Includes staffing, human resources development, compensation plans, labor and management relations, appraisal systems and career planning.
- 211 BASIC ACCOUNTING I** 3 credits  
Accounting for sole proprietorships and partnerships. Service and merchandising concerns. Journals, ledgers, work sheets, and financial statements. Includes handling of cash, accounts receivable, notes, inventories, plant and equipment, and payroll.
- 212 BASIC ACCOUNTING II** 3 credits  
Prerequisite: 211. Study of accounting principles as applied to corporate form of business, and of manufacturing accounting for job order and process costing, budgeting and standard costs.
- 213 BASIC ACCOUNTING III** 3 credits  
Prerequisite: 212. Study of information needs of management. Emphasis on the interpretation and use of accounting data by management in planning and controlling business activities.
- 214 ESSENTIALS OF INTERMEDIATE ACCOUNTING** 3 credits  
Prerequisite: 212. Study of development of financial accounting theory and its application to problems of financial statement generation, account valuation, analysis of working capital, and determination of net income.
- 216 SURVEY OF COST ACCOUNTING** 3 credits  
Prerequisite: 213. Provides student with conceptual understanding of how accounting information is developed and used for product costing, decision making and managerial planning and control.
- 217 SURVEY OF TAXATION** 4 credits  
Prerequisite: 212. Survey course of basic tax concepts, preparation of returns, supporting schedules and forms for individuals and businesses. Federal, state and local taxes are discussed. The major emphasis of this course is on business taxes.
- 225 CREDIT UNION LENDING AND COLLECTIONS** 2 credits  
Credit and collections including nature and role of credit, types of consumer credit, their management and investigation, along with collection policies, practices, systems.

- 227 ENTREPRENEURSHIP PROJECTS** 4 credits  
Prerequisite: 118. An overview of small business management. A project course during which students create a hypothetical business.
- 233 INSTALLMENT CREDIT** 2 credits  
Prerequisite: 113. Pragmatic course emphasizing evaluation, maintenance of consumer, commercial credit. Covers evaluation, legal aspects, collection, direct and indirect installment lending, leasing and other special situations, credit department management.
- 243 SURVEY IN FINANCE** 3 credits  
Prerequisites: three credits of economics and three credits of accounting. Survey of field including instruments, procedures, practices and institutions. Emphasis on basic principles.
- 245 CREDIT UNION FINANCIAL MANAGEMENT** 2 credits  
Prerequisite: 211. Credit union accounting, financial statement analysis, budgeting and planning, management of cash and investments, liquidity, cost of funds, risk.
- 253 ELEMENTS OF BANK MANAGEMENT** 2 credits  
Prerequisite: 113. Applied course in bank operation and management. Bank case studies utilized to focus on objectives, planning, structure, control, and interrelationship of bank functions and departments.
- 273 MONETARY SYSTEMS AND THE PAYMENTS MECHANISM** 3 credits  
Prerequisite: 280. Structure of banking system, Federal Reserve System policies and operations, Article IV of the 4CC, paperless electronic payments mechanism, bank responsibilities in deposit, collection, dishonor and return, payment of checks.
- 280 ESSENTIALS OF LAW** 3 credits  
Brief history of law and judicial system, study of contracts with emphasis on sales, agency, commercial paper and bailments.
- 290 SPECIAL TOPICS: BUSINESS MANAGEMENT TECHNOLOGY** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in business management technology.

## REAL ESTATE (Inactive)

### 2430:

- 105 REAL ESTATE PRINCIPLES** 2 credits  
Introduction to real estate as a profession, process, product and measurement of its productivity. The student is responsible for reading and discussions relative to real estate and the American system.
- 115 ELEMENTS OF HOUSING DESIGN AND CONSTRUCTION** 2 credits  
Prerequisites: 105, 185. Discussions and readings on neighborhoods and sites, details of the interior and exterior of homes, mechanical systems and house construction which help professionals discharge agency responsibilities.
- 125 ELEMENTS OF LAND AND REAL ESTATE DEVELOPMENT** 2 credits  
Prerequisites: 105, 185. Learning and applying step-by-step processes needed by professional developer in producing real estate for consumption.
- 185 REAL ESTATE LAW** 2 credits  
Prerequisite: 105. Contents of contemporary real estate law. The student is responsible for readings covering units on estates, property rights, license laws, contracts, deeds, mortgages, civil rights, and zoning.
- 205 INTRODUCTION TO REAL ESTATE MANAGEMENT** 3 credits  
Prerequisites: 105, 185. Survey course focusing on application of management process to the specialized field and product of real estate. Discussion and research topics include property analysis, marketing and administration.
- 215 ESSENTIALS OF REAL ESTATE ECONOMICS** 2 credits  
Prerequisites: 105, 185. Student learns and applies techniques of analysis found in economics to local real estate market and to parcels of real estate found within the market.
- 225 INDUSTRIAL REAL ESTATE** 2 credits  
Prerequisites: 105, 185. Elements course focusing on functions of industrial real estate broker. Topics of discussion and research include site selection, development, marketing, and financing transfer of industrial property.
- 235 COMMERCIAL REAL ESTATE** 2 credits  
Prerequisites: 105, 185. Elements course focusing on functions of commercial real estate broker. Topics of discussion and research include site selection, development, marketing, and financing transfer of commercial paper.
- 245 REAL ESTATE FINANCE** 2 credits  
Prerequisites: 105, 185. Study of contents of contemporary real estate finance. Units on reading and discussion include mortgage instruments, financial institutions, mortgage market, governmental influence on finance, and risk analysis and mortgage lending.
- 255 VALUATION OF RESIDENTIAL PROPERTY** 2 credits  
Prerequisites: 105, 185. Methods used to estimate value in residential property including cost of reproduction, market data and income approach. Student prepares an appraisal on a residential property.
- 265 REAL ESTATE BROKERAGE** 2 credits  
Prerequisites: 105, 185. Application of management functions of planning, organizing, directing, controlling and staffing to real estate brokerage office. Student activities include reading, discussion and research.
- 275 SPECIAL PROJECT IN REAL ESTATE** 2 credits  
Prerequisites: 105, 185, 245, 255, and 265. Student demonstrates knowledge of real estate by preparing a written report covering brokerage process as it relates to a parcel of property.
- 285 APPLIED REAL ESTATE MATHEMATICS** 2 credits  
Prerequisites: 105, 185. Student learns and applies mathematics necessary to profession of real estate. Topics include proration of taxes, area calculations, appraising mathematics, mortgage mathematics, and closing statements.
- 290 SPECIAL TOPICS: REAL ESTATE** 1-3 credits  
Prerequisite: permission. Selected topics or subject areas of interest in real estate.

## COMPUTER PROGRAMMING

### 2440:

- 120 COMPUTER AND SOFTWARE FUNDAMENTALS** 2 credits  
General overview of data processing techniques providing fundamentals necessary for subsequent computer-oriented courses.
- 121 INTRODUCTION TO PROGRAMMING LOGIC** 2 credits  
Corequisite: 120. Introduction to fundamental concepts of problem solving and developing programming logic, with emphasis on effective design of business application programs.
- 125 LOTUS 1-2-3** 2 credits  
Emphasizes mastery of spreadsheet applications using LOTUS 1-2-3.
- 130 BASIC PROGRAMMING FOR BUSINESS** 3 credits  
Introduces the student to the fundamental concepts of computer programming using the BASIC language. Emphasis is on developing computer programs on a microcomputer system.
- 131 INTRODUCTION TO PROGRAMMING** 2 credits  
Corequisite: 120. Teaches fundamental programming concepts in a high-level language such as Pascal. Also provides experience with on-line job submission for execution by main frame computers.
- 132 ASSEMBLER PROGRAMMING** 2 credits  
Prerequisite: 131. Emphasis on Basic Assembler Language and practical application programming using BAL.
- 133 STRUCTURED COBOL PROGRAMMING** 3 credits  
Prerequisite: 121. Introduction to COBOL with specific orientation to structured techniques.
- 151 PC DOS FUNDAMENTALS** 1 credit  
Includes instruction in the standard DOS commands as well as the use of batch files, autoexec files, subdirectories, and paths.
- 220 SOFTWARE APPLICATIONS FOR BUSINESS** 2 credits  
Prerequisites: 120 and 125. Emphasizes application software packages. The packages covered are selected according to current business needs.
- 234 ADVANCED COBOL PROGRAMMING** 3 credits  
Prerequisite: 133. Emphasizes advanced COBOL applications, including file organization concepts.
- 235 CURRENT PROGRAMMING TOPICS** 2 credits  
Prerequisite: 133. Emphasizes new developments related to programming.
- 239 RPG II PROGRAMMING** 2 credits  
Prerequisite: 121 or permission of coordinator. Report Program Generator (RPGII) programming. Includes coding and debugging business applications.
- 241 SYSTEMS ANALYSIS AND DESIGN** 3 credits  
Prerequisite: 133. Covers all phases of business systems analysis, design, development, and implementation. Such principles as system flowcharting and file and document design emphasized.
- 243 INFORMATION CENTER PRACTICUM** 3 credits  
Prerequisite: 234 or permission. Students explore the information center concept in a business environment and acquire real world experience using and assisting others to use popular business-oriented software.
- 245 INTRODUCTION TO dBASE III+/IV** 3 credits  
Prerequisite: 120. Explains fundamental data base concepts and provides hands-on experience using dBase III+/IV relational model.
- 247 MICROCOMPUTER HARDWARE AND SOFTWARE SELECTION** 3 credits  
Prerequisites: 125, 151; 245. Familiarizes students with the advantages and disadvantages of the microcomputer hardware and software available. Product comparisons, selection criteria, and evaluation are explored.
- 250 BASIC PROGRAMMING APPLICATIONS IN BUSINESS** 5 credits  
Prerequisite: 130. Offers intensive training in business applications programming on microcomputer systems including data analysis; text processing; error trapping; sorting; development of menu driven programs; ISAM file creation and upkeep.
- 251 COMPUTER APPLICATIONS PROJECTS** 4 credits  
Prerequisites: 234 and 241. Provides workshop for the accomplished student to apply learned material. Projects involve systems design and implementation using COBOL.
- 252 JOB CONTROL LANGUAGE** 2 credits  
Prerequisite: 234. Explanation of JOB, EXEC and DD statements and their associated parameters. JCL procedures and overrides.
- 255 INTRODUCTION TO NETWORK ADMINISTRATION** 3 credits  
Prerequisite: 120, 151. Introduces the student to Novell NetWare administration and modern communications concepts. Topics address planning the network file system, network security, and network management and support.
- 261 CICS CUSTOMER INFORMATION CONTROL SYSTEM** 3 credits  
Prerequisite: 234. Basic concepts of CICS for on-line transaction processing.
- 262 COBOL EFFICIENCY** 2 credits  
Prerequisite: 234. Provides students with opportunity to enhance their knowledge of the COBOL language. The development of COBOL, its facility for change and its place in today's businesses.
- 263 DATA-BASE CONCEPTS** 3 credits  
Prerequisites: 234, 241. Fundamental concepts of the main types of data-base management systems, their similarities and differences.
- 265 PROGRAMMING ETHICS AND SECURITY** 2 credits  
Prerequisite: 133. Legal principles specific to field of data processing; potential for computer-oriented crimes and security measures necessary for their prevention.

- 266 BASIC FOR PROGRAMMERS** 3 credits  
Prerequisite: 133 or permission of coordinator. To familiarize students with important programming techniques and concepts in BASIC language. Emphasis on complex interactive business applications programs using microcomputers.
- 267 4GL FOR MICROS: dBASE III+** 3 credits  
Prerequisite: 133. Provides instruction in the development of microcomputer systems using dBase III Plus as a fourth generation language.
- 269 C PROGRAMMING AND UNIX** 3 credits  
Prerequisites: 132 and 133 or permission. Designing, coding, and executing C programs on the UNIX operating system. Assignments address business applications problems and include both interactive and batch processing.
- 270 NETWORK MANAGEMENT I** 4 credits  
Prerequisites: 120, 151. In-depth instruction in basic and advanced network system administration. Topics address the network directory structure, menus, back-up procedures, printers, memory management, and multiple protocol support.
- 272 NETWORK TECHNOLOGIES** 2 credits  
Prerequisites: 120, 151. Basic concepts of data communications, networking, and connectivity. Includes: OSI model; data translation; signal multiplexing and conversion; Ethernet, Token Ring, Arcnet, LocalTalk, and FDDI technologies.
- 274 NETWORK SERVICE AND SUPPORT** 4 credits  
Prerequisite: 270. Focus on installing, maintaining, and troubleshooting LANs. Includes: operating system installation, LAN topologies and protocols, board configuration, cabling systems, and disk subsystems.
- 276 NETWORK MANAGEMENT II** 4 credits  
Prerequisites: 120 and 151. In-depth instruction in global network system administration. Topics include security, auditing, printing, backup, performance optimization, and client services management.
- 290 SPECIAL TOPICS: DATA PROCESSING** 1-3 credits  
Prerequisite: permission. Seminar in topics of current interest in data processing or special individual student projects in data processing.
- 299 WORKSHOP** 1-5 credits  
Workshops offered to meet community training needs.

## MARKETING AND SALES TECHNOLOGY

### 2520:

- 103 PRINCIPLES OF ADVERTISING** 3 credits  
Review of basic principles and functions of current advertising practice. Includes overview of related distributive institutions, media types and economic functions of advertising.
- 106 VISUAL PROMOTION** 3 credits  
Studio course in retail display and promotion techniques. Window, interior and point of purchase categories; principles of design as applied to commercial art; function in visual design, elements of design, color theory, lettering, printing process, layout to camera-ready art.
- 201 PRINCIPLES OF WHOLESALING** 3 credits  
Examination of wholesaler and wholesaling function. Attention given to buying process and relationship of ultimate consumer to wholesaler.
- 202 RETAILING FUNDAMENTALS** 3 credits  
Presents basic principles and practices of retailing operations, including site selection, buying, pricing and promotion practices. Use is made of extensive projects and investigations and actual retail operations.
- 203 FUNDAMENTALS OF INDUSTRIAL DISTRIBUTION** 3 credits  
Prerequisite: 2420:101. An introductory examination of the industrial distribution network and pertinent middlemen involved. Includes wholesalers, service institutions and other channel members.
- 207 TECHNIQUES OF MERCHANDISING RESEARCH** 2 credits  
Prerequisite: 2420:101. Introduction to merchandising research. Uses of research for merchandisers, concepts in planning research. Approaches to research in a non-mathematical approach to analysis. Case histories of small merchandisers.
- 210 CONSUMER SERVICE FUNDAMENTALS** 2 credits  
Prerequisite: 2420:101. Discussion of problems facing business today created by social issues in society. Emphasis on understanding viewpoints of all groups involved.
- 211 MATHEMATICS OF RETAIL DISTRIBUTION** 3 credits  
Prerequisite: 2420:170. Basic course dealing with merchandising mathematics. Includes understanding markup types, retail method of inventory (sales and stock planning), and open-to-buy computations.
- 212 PRINCIPLES OF SALES** 3 credits  
Study of basic principles of selling, emphasizing individual demonstrations and sales projects. Includes review of sales function as integral part of marketing process.
- 215 ADVERTISING PROJECTS** 2 credits  
Prerequisites: 103, 106. A workshop for students interested in developing their advertising and creative promotional skills. Projects would include "real world" situations facing prospective users of advertising.

- 217 MERCHANDISING PROJECTS** 2 credits  
Prerequisites: 2420:101; 202.\* Students would be charged with "creating" a retail operation including the establishment and defense of planning, site selection, merchandise and pricing, and promotion strategies.
- 219 SALES PROJECTS** 2 credits  
Prerequisite: 212\*. Allows students to sharpen skills necessary to make an effective sales presentation. Extensive use of video-tape analysis. Team as well as individual sales presentations.
- 221, 222 AAF ADVERTISING CAMPAIGN I, II** 2 credits each  
Prerequisite: permission. These sequential courses have one function: to have students prepare an entry for the annual American Advertising Federation's Collegiate Advertising Competition.
- 234 HUMOR IN ADVERTISING** 2 credits  
Course looks at humor in our society and how and why it has been used by advertising practitioners; uses individual and group projects.
- 290 SPECIAL TOPICS: MARKETING AND SALES** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in sales and merchandising.

## OFFICE ADMINISTRATION

### 2540:

- 119 BUSINESS ENGLISH** 3 credits  
Fundamentals of English language with emphasis on grammatical correctness, acceptable usage, spelling and punctuation. Limited writing primarily involves choice of precise words and effective sentence structure with some attention to paragraph development.
- 121 INTRODUCTION TO OFFICE PROCEDURES** 3 credits  
Introduction to concepts regarding role of office worker, human relations, communications, productivity, reference materials, technological advances in processing information and employment opportunities.
- 125 ELECTRONIC BUSINESS CALCULATIONS** 2 credits  
Applied business problems in retailing, payroll, interest, taxes, metrics, proration, percentages, and basic statistics using 10-key electronic calculators and personal computers.
- 129 INFORMATION/RECORDS MANAGEMENT** 3 credits  
Overview of records used in business. Includes filing procedures, equipment, supplies, classification systems, alphabetic rules, electronic database systems, and management and control of records systems.
- 130 INTRODUCTION TO OFFICE AUTOMATION** 4 credits  
Prerequisites: 129, 150 or permission. Introduction to the equipment necessary to work in today's office. Hands-on training using several types of automated office equipment.
- 131 COMPUTERIZED DOCUMENT CONTROL** 4 credits  
Prerequisite: 130. A study of the planning and controlling of documents from the time of their creation until their final disposition with emphasis on automated storage and retrieval systems.
- 140 KEYBOARDING FOR NONMAJORS** 2 credits  
Beginning keyboarding for the non-secretarial student. Fundamentals in the operation of the keyboard; application emphasis on individual student needs such as resumes, application letters and forms, term reports, abstracting, etc. Credit not applicable toward associate degree in Office Administration.
- 141 WORDPERFECT, BEGINNING** 2 credits  
Prerequisites: Basic touch typing skills. Introduction to WordPerfect word processing software for non-majors. Training on personal computers for personal and business communications.
- 150 BEGINNING KEYBOARDING** 3 credits  
For the beginning student or one who desires a review of fundamentals. Includes basic keyboard, letters, tables and manuscripts. Minimum requirement: 30 wpm with a maximum of 5 errors for 5 minutes.
- 151 INTERMEDIATE KEYBOARDING** 3 credits  
Prerequisite: 150 or equivalent. Further development of typewriting. Advanced letter styles, forms, reports and shortcuts. Minimum requirement: 40 wpm with a maximum of 5 errors for 5 minutes.
- 171 SHORTHAND PRINCIPLES** 4 credits  
Gregg shorthand theory is taught. Minimum attainments: reading from notes at 100 wpm and taking dictation from new material at 50 wpm for 3 minutes. Credit not allowed if taken after 172. Offered at Wayne Campus only.
- 172 SHORTHAND REFRESHER AND TRANSCRIPTION** 4 credits  
Accelerated review of Gregg shorthand theory. Minimum attainments: reading from notes at 100 wpm and taking dictation from new material at 60 wpm for 3 minutes. Credit allowed if taken after 171. Offered at Wayne Campus only.
- 173 SHORTHAND AND TRANSCRIPTION** 4 credits  
Prerequisite: 171; corequisite or prerequisite: 151. Emphasis on developing skill in taking shorthand dictation and transcribing at typewriter. Minimum speed attainment of 70 wpm for 5 minutes on new material required. Offered at Wayne Campus only.
- 241 INFORMATION MANAGEMENT** 3 credits  
Prerequisite: 150 or equivalent. Study of creation, classification, encoding, transmission, storage, retention, transfer and disposition of information. Emphasis on written, oral and machine language communication media used in business information systems. Offered at Wayne campus only.
- 243 INTERNSHIP** 2-3 credits  
Prerequisites: 119; 121; 129; 130; 253; 270; and 281. Work experience in an office environment related to the student's degree major. Application of office administration skills/knowledge.

- 247 AUTOMATED OFFICE SYSTEMS** 4 credits  
Prerequisite: 131. Examination of automated methods of controlling information. Application of office information management techniques.
- 248 ADVANCED OFFICE TECHNOLOGIES** 3 credits  
Prerequisites: 131; 247. Study and application of advanced automated office systems. Emphasis on the automation of administrative support functions.
- 253 ADVANCED KEYBOARDING/WORD PROCESSING** 3 credits  
Prerequisites: 151 or equivalent. To increase student's ability to produce office documents on computers. Minimum requirement: 50 wpm with maximum of 5 errors for 5 minutes.
- 255 LEGAL OFFICE PROCEDURES I** 3 credits  
Prerequisite: 151. Concentration on ethics, responsibilities, and document production for the career legal secretary.
- 263 BUSINESS COMMUNICATIONS** 3 credits  
Prerequisites: 119 and 2020:121 or equivalent. Business writing with emphasis on communicating in typical business situations and expressing ideas effectively to achieve specific purposes. Includes business letters, memoranda, application letters, resumes, and a business report.
- 264 ADVANCED BUSINESS COMMUNICATIONS** 3 credits  
Prerequisite: 263 or equivalent. Provides information about and practice in oral and advanced written communications to strengthen skills necessary in today's business world.
- 265 WOMEN IN MANAGEMENT** 3 credits  
Deals with gender-related needs and problems of women in management and supervision.
- 270 OFFICE SOFTWARE APPLICATIONS** 4 credits  
Prerequisites: 130; 253. An advanced course in document production incorporating databases, spreadsheets, and graphics into various types of documents.
- 271 DESKTOP PUBLISHING** 3 credits  
Prerequisites: 253 or permission. Desktop publishing software used to create printed materials such as newsletters, brochures, business forms, and resumes. Course addresses design/layout decision and editing for the office worker.
- 279 LEGAL OFFICE PROCEDURES II** 4 credits  
Prerequisite: 255. Provides an understanding of various facets of the law, when and how to use documents, important legal procedures and typical office routine.
- 281 MACHINE TRANSCRIPTION** 2-3 credits  
Prerequisites: 151 or permission. Transcription skills such as proofreading and editing emphasized on the transcription from taped dictation with emphasis on mailable documents production of such on computers.
- 290 SPECIAL TOPICS: OFFICE ADMINISTRATION** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in office administration.
- 299 WORKSHOP** 1-5 credits  
Workshops offered to meet community training needs.

## TRANSPORTATION

### 2560:

- 110 PRINCIPLES OF TRANSPORTATION** 3 credits  
Analysis of role of transportation in nation's economic development. Survey of historical development and economic aspects of rail, highway, water, air, and pipeline.
- 115 MOTOR TRANSPORTATION** 3 credits  
Corequisite: 110 is to be taken in the first semester of the first year of the program. Study of economic characteristics of commercial motor industry with emphasis on problems, practices, rates, regulations, fares, tariffs, operations, equipment, and financial aspects.
- 116 AIR TRANSPORTATION** 2 credits  
Corequisite: 110. Analysis of economic characteristics of commercial air industry. Study of its problems, practices, regulations, rates, fares, tariffs, and services.
- 117 WATER TRANSPORTATION** 2 credits  
Prerequisite: 110. Theories, practices, regulations of inland and ocean-going water transportation including classification, rates, practices, and tariffs.
- 118 TRANSPORTATION RATE SYSTEMS** 3 credits  
Prerequisite: 110. Analysis of freight rates, tariffs and classifications with particular attention to their application in motor transport field and extensive study through progressive problem solving.
- 221 TRAFFIC AND DISTRIBUTION MANAGEMENT** 3 credits  
Prerequisite: 110. Principles and practices applicable to industrial traffic management and factors affecting transportation decisions. Some items analyzed are operations, services, warehousing, privileges, and documentation.
- 222 MICROCOMPUTER APPLICATIONS IN TRANSPORTATION** 3 credits  
Prerequisite: 110; corequisite: 2440:120. Microcomputer solutions to selected transportation problems. Lease vs. buy analysis, modal selection based on cost, use of transportation algorithms, and computer simulations.
- 224 TRANSPORTATION REGULATION** 3 credits  
Prerequisite: 110. Interstate Commerce Act and related acts including leading cases involving interstate commerce. Law of freight loss and damage. Regulatory procedures including practice and procedure before Interstate Commerce Commission.
- 227 TRANSPORTATION OF HAZARDOUS MATERIALS AND WASTES** 2 credits  
Prerequisite: 110. Review of federal regulations covering hazardous material shipments; identification and classification of hazardous materials; marking; labeling; placarding; and documentation.

\* May be taken concurrently.

- 228 INTRODUCTION TO TRAVEL** 2 credits  
Prerequisite: 110. Travel geography, overview of passenger transportation systems, role of travel agent, discussion of trends in travel industry.
- 229 PASSENGER TICKETING** 2 credits  
Prerequisite: 228. Overview of the ticketing process and the use of the Official Airline Guide. Use and preparation of tour orders, ticket exchange notices, refund notices, and internal documents used by travel agent organizations.
- 230 TOUR PLANNING AND PACKAGING** 2 credits  
Prerequisite: 228. Planning and packaging of independent and escorted tours. Cost estimating, time distribution, itinerary preparation and routing. Cruise, hotel, and rental car operations are also examined.
- 231 COMPUTERIZED RESERVATIONS I** 2 credits  
Prerequisite: 228. Corequisite: 229. Hands-on experience in computerized reservation entries and applications. Course is offered off-campus at an area travel agency using a major airline reservations system.
- 232 COMPUTERIZED RESERVATIONS II** 2 credits  
Prerequisite: 231. Continuation of 231. Advanced computerized reservations topics are examined. Off-campus location.
- 290 SPECIAL TOPICS: TRANSPORTATION** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics, subject areas in transportation.

## HISTOTECHNOLOGY

### 2730:

- 225 HISTOTECHNOLOGY PRACTICUM** 5 credits  
Prerequisites: 3100:366 and permission. Instruction and practical experience in a cooperative hospital, research laboratory.
- 290 SPECIAL TOPICS IN HISTOTECHNOLOGY** 1-2 credits  
Prerequisite: permission. Selected topics or subject areas of interest.

## MEDICAL ASSISTING

### 2740:

- 100 INTRODUCTION TO MEDICAL ASSISTING** 2 credits  
Medical assistant's role on allied health team, history of medicine, medical practice, medical law and ethics.
- 120 MEDICAL TERMINOLOGY** 3 credits  
Study of language used in medicine.
- 121 STUDY OF DISEASE PROCESSES FOR MEDICAL ASSISTING** 3 credits  
Prerequisite: 120. Study of diseases of major body systems.
- 135 MEDICAL ASSISTING TECHNIQUES I** 4 credits  
Introduction to medical laboratory, theories and procedures essential for a medical assistant's career.
- 230 BASIC PHARMACOLOGY** 3 credits  
Overview of drugs used in a medical setting.
- 235 MEDICAL ASSISTING TECHNIQUES II** 4 credits  
Prerequisite: 135. Advanced medical laboratory theories and practices essential for a medical assistant's career.
- 240 MEDICAL MACHINE TRANSCRIPTION** 3 credits  
Prerequisites: 2540:151; 120. Designed to correlate word processing and typing skills necessary for the transcription of a physician's dictation.
- 241 MEDICAL RECORDS** 3 credits  
Prerequisites: 2540:130; 120. Introduction to insurance procedures and codings used in a physician's office.
- 260 EXTERNSHIP IN MEDICAL ASSISTING** 3 credits  
Prerequisites: permission. A period of practical experience held in the office of a qualified physician.
- 290 SPECIAL TOPICS: MEDICAL ASSISTING** 1-2 credits  
Prerequisite: permission. Selected topics or workshops of interest in medical assisting technology.

## RADIOLOGIC TECHNOLOGY

### 2760:

- 101 INTRODUCTION TO RADIOLOGIC TECHNOLOGY** 2 credits  
Prerequisite: admission to the program. Introduction to field of radiology including history of medicine and radiology. Ethical and professional responsibilities of radiologic technologist. Basic protection and basic skills. Orientation to radiology departments of affiliated hospitals. General patient care.
- 140 MEDICAL AND SURGICAL DISEASES, RADIOLOGY** 3 credits  
Prerequisites: 101 and 161. Fundamental principles of disease processes, functional derangements. Background in pathology needed for radiographer will be provided by lecture and demonstrations.
- 161 PHYSICAL SCIENCE FOR RADIOLOGIC TECHNOLOGY I** 2 credits  
Prerequisites: 2030:130 or 2030:151 and permission. Introduction to systems of measurement. Matter, force, motion, work, power, energy, basic electricity, and magnetism.
- 165,6 RADIOGRAPHIC PRINCIPLES I, II** 3 credits, 2 credits  
Sequential. Prerequisite: 161. Elementary principles of ionizing radiation and their application in medical setting. Radiographic accessories and chemical processing of exposed x-ray film.
- 170 RADIOGRAPHIC POSITIONING I** 3 credits  
Corequisite: 101. Introductory course in instructing student in basic positioning nomenclature and radiologic positions. Positioning laboratory experience included.
- 171 RADIOGRAPHIC POSITIONING II** 3 credits  
Prerequisite: 170. Continuation of 170. Includes additional positioning and refinement of positioning strategies. Laboratory.
- 184 CLINICAL APPLICATION I** 4 credits  
Corequisites: 101 and 170. Introduction to clinical procedures including clinical experience in hospital radiology departments. Lectures and laboratory experience correlated and clinical experience closely supervised. Film critique stressed. Observation rotation through nuclear medicine, therapy and diagnostic techniques. Largely student observation.
- 185 CLINICAL APPLICATION II** 4 credits  
Prerequisite: 184. Continuation of 184 with more involvement by student continuing under close supervision. Special procedures introduced. Student observations and student participation.
- 230 RADIOGRAPHIC TECHNIQUE AND CONTROL** 3 credits  
Prerequisite: 261. Technique and control as related to basic positioning procedures for various parts of body. Relationship among electricity, time, distance, films and contrast on radiograph. A student performs experiments to demonstrate effects of these factors. Energized but nonclinical equipment utilized.
- 261 PHYSICAL SCIENCE FOR RADIOLOGIC TECHNOLOGY II** 3 credits  
Prerequisite: 161. Fundamentals of electricity and radiation physics. Principles of x-ray equipment and other radiation sources used in medical setting.
- 272 RADIOGRAPHIC POSITIONING III** 3 credits  
Prerequisite: 171. Continuation of 171. Includes additional positioning and refinement of positioning strategies. Laboratory.

- 273 RADIOGRAPHIC POSITIONING IV** 3 credits  
Prerequisite: 272. Continuation of 272 utilizing advanced techniques and providing concentration of different age groups in positioning care and special techniques for pediatric and geriatric patients. Laboratory.
- 286 CLINICAL APPLICATION III** 5 credits  
Prerequisite: 185. Summer clinic internship in which student practices all radiographic procedures under supervision. Some independent performance with minimal supervision.
- 287 CLINICAL APPLICATION IV** 4 credits  
Prerequisites: 286 and permission. Clinical performance with supervision. Application at an advanced level. Special techniques, nuclear medicine, therapy, medical surgical pathology, film examination and critique. Maintenance of equipment, department administration, ethical, legal, and professional responsibilities. Clinical experience in hospital radiology departments.
- 288 CLINICAL APPLICATION V** 4 credits  
Prerequisite: 287. Clinical experience and minimally supervised clinical procedures of diagnostic radiography.
- 289 CLINICAL APPLICATION VI** 5 credits  
Prerequisite: 288. Continuation of 288; final internship. Terminal course including review, lecture on correlation and interpretation of radiologic technology. Prepares student for certification examination.
- 290 SPECIAL TOPICS: RADIOLOGIC SCIENCE** 1-3 credits  
(May be repeated with a change in topic) Prerequisite: permission. More advanced study in one or more topics in radiological sciences. Emphasis and topics vary from year to year but will be in areas where a formal course is not otherwise available.

## SURGICAL ASSISTING

### 2770:

- 100 INTRODUCTION TO SURGICAL ASSISTING TECHNOLOGY** 4 credits  
Prerequisite: admission to the program. Study of basic principles which underlie patient care in the operating room. Role of operating room technician and legal and ethical responsibilities defined.
- 121 SURGICAL ASSISTING PROCEDURES I** 2 credits  
Prerequisite: Admission to the program. Corequisite: 100. Didactic and laboratory practice in principles and practices of surgical asepsis, the surgical patient, surgical procedures, care and maintenance of equipment and materials, immediate postoperative responsibilities and emergency situations in operating room.
- 131 CLINICAL APPLICATION I** 2 credits  
Corequisites: 100 and 121. Student assigned to surgical service of affiliated hospitals. Emphasis on aseptic techniques and skills associated with their implementation.
- 148 SURGICAL ANATOMY I** 3 credits  
Corequisite: 3100:206. Emphasis on human anatomy and understanding the body in its three dimensions and the relationships of parts to one another in the various surgical specialties.
- 151 CLINICAL EXPERIENCE I** 2 credits  
Corequisites: 100, 121. Clinical experience in campus laboratory and surgical unit of affiliated hospitals. Emphasis on aseptic techniques, patient care concepts and suture techniques.
- 152 CLINICAL EXPERIENCE II** 3 credits  
Prerequisites: 100, 121; 151. Corequisite: 249. Students assigned to assist in surgery and carry out preoperative and postoperative care procedures under supervision of surgeon or resident surgical staff.
- 153 CLINICAL EXPERIENCE III** 5 credits  
Prerequisite: 152. Students assigned to surgical services of affiliated hospitals to assist in surgery and carry out preoperative and postoperative care procedures as assigned by, and under supervision of, surgeon or resident surgical staff.
- 222 SURGICAL ASSISTING PROCEDURES II** 4 credits  
Prerequisite: 121. Continuation of 121.
- 232 CLINICAL APPLICATION II** 5 credits  
Prerequisite: 131; corequisite: 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" on general surgery and gynecology procedures.
- 233 CLINICAL APPLICATION III** 5 credits  
Prerequisites: 232 and 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" in the specialty areas.
- 243 INTRODUCTION TO MEDICINE** 2 credits  
Prerequisite: 249. Pathophysiology, clinical manifestations, therapeutic management of surgically related disorders.
- 244 MEDICAL HISTORY AND PHYSICAL EVALUATION** 2 credits  
Prerequisite: 249. Introduction to techniques of obtaining medical histories and physical evaluations. Techniques of interviewing and physical diagnosis.
- 245 ROENTGENOGRAM ASSESSMENT** 1 credit  
Prerequisite: 249. Roentgenogram assessment and its use as a diagnostic tool. Recognition of gross abnormalities in roentgenograms of the head, neck, chest, abdomen, pelvis, and extremities.
- 246 MEDICAL LABORATORY PROCEDURES** 1 credit  
Prerequisite: 249, second year only. Introduction of collection, preparation, and analysis of biological fluids and other substances through standard procedures utilized in medical laboratories to aid the physician in diagnosis, treatment and prevention of disease.
- 247 PULMONARY ASSESSMENT AND ELECTROCARDIOGRAPHY** 2 credits  
Prerequisite: 249, second year only. Oxygen administration, humidity control, breathing exercises, postural drainage, percussion techniques, intermittent positive pressure breathing, management of ventilators and bedside ventilation measurements. Electrocardiogram recording techniques, interpretation of electrocardiographic abnormalities-arrhythmias.

- 249 SURGICAL ANATOMY II** 3 credits  
Prerequisite: 148. Emphasis on human anatomy and understanding the body in its three-dimensions and the relationships of parts to one another in the various surgical specialties.
- 254 CLINICAL EXPERIENCE IV** 3 credits  
Prerequisite: 153. Student assigned to surgical services of affiliated hospital to assist in surgery and carry out preoperative and postoperative care procedures as assigned by, and under supervision of, surgeon or resident surgical staff.
- 255 CLINICAL EXPERIENCE V** 5 credits  
Prerequisite: 254. Student assigned to surgical services of affiliated hospitals to assist in surgery and carry out preoperative and postoperative care procedures as assigned by, and under supervision of, surgeon or resident surgical staff.
- 256 PRIMARY CARE: CLINICAL EXPERIENCE** 2 credits  
Prerequisites: 243; 244. Instruction in essentials of establishing a health status data base through patient interviewing and physical examination. Clinical practice in performance offered in real and/or simulated situation.
- 290 SPECIAL TOPICS: SURGICAL ASSISTING** 1-2 credits  
Prerequisite: permission. Selected topics or workshops of interest in surgical assisting technology.

## ALLIED HEALTH

### 2780:

- 101 INTRODUCTION TO PHYSICAL THERAPY** 2 credits  
History of physical therapy, survey of treatment procedures. Role and rationale for physical therapist assistant. Legal, ethical responsibilities.
- 106, 107 ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH I, II** 3 credits each  
Prerequisite: permission. Introduction to the study of human structure and function. No laboratory. (Will not satisfy General Studies science requirement.)
- 290 SPECIAL TOPICS: ALLIED HEALTH** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in allied health.

## RESPIRATORY CARE

### 2790:

- 121 INTRODUCTION TO RESPIRATORY CARE** 3 credits  
Prerequisite: admission to program. Basic science and laws governing gases as well as appliances to administer and monitor oxygen. Covers equipment used to generate and give aerosol therapy. Lecture/laboratory.
- 122 RESPIRATORY PATIENT CARE** 3 credits  
Prerequisites: 2780:106 (or equivalent) 2790:121. Corequisite: 2780:107 (or equivalent). Covers basic hospital practices in sterile technique, suctioning and postural drainage. Lecture/laboratory.
- 123 MECHANICAL VENTILATORS** 3 credits  
Prerequisite: 122, 131, 141. Introduction to different brands of ventilators and their functions. Airway and airway complications.
- 131 CLINICAL APPLICATIONS I** 3 credits  
Prerequisites: 121, 2780:106. Corequisite: 2780:107. Full admission to the program. (Implies the student has a clinical space. Students identified as Alternates do not have a clinical space.) Introduction to work in hospital and hands-on experience on hospital equipment. Laboratory.
- 132 CLINICAL APPLICATIONS II** 2 credits  
Prerequisites: 122, 131, 141, 2780:107 (or equivalent). First of several rotations through hospitals. Mechanical ventilation is stressed.
- 133 CLINICAL APPLICATIONS III** 5 credits  
Prerequisites: 123, 132, 201. Semester is broken into three, five-week rotations, one at each hospital to cover specialty area for that site. Laboratory.
- 134 CLINICAL APPLICATIONS IV** 5 credits  
Prerequisites: 133, 223, 242. Semester has three, five-week sessions. They will be spent at different clinical sites working on their specialty areas. Laboratory.
- 141 PHARMACOLOGY** 2 credits  
Corequisites: 2840:100 and 3100:130. Drugs administered by respiratory therapy and effect, route of action in the body. Lecture.
- 201 ANATOMY AND PHYSIOLOGY OF CARDIOPULMONARY SYSTEMS** 3 credits  
Prerequisite: 2780:107 (or equivalent). Study of normal anatomy and physiology of heart and lungs. Lecture.
- 223 ADVANCED RESPIRATORY CARE** 3 credits  
Prerequisites: 123, 201. Covers EKG, Pulmonary functions, research studies and radioactive pulmonary function studies. Lecture/laboratory.
- 224 PULMONARY REHABILITATION AND THE RESPIRATORY CARE DEPARTMENT** 2 credits  
Prerequisites: 223, 242. Covers area of pulmonary rehabilitation. Includes essentials of establishing a respiratory therapy department. Lecture/laboratory.
- 242 PATHOLOGY FOR RESPIRATORY CARE** 3 credits  
Prerequisites: 201, 3100:130. Discussion of disease processes, diseases of lung and heart, their effect on respiratory therapy.
- 290 SPECIAL TOPICS: RESPIRATORY CARE** 3 credits  
(May be repeated for a maximum of three credits) Prerequisite: permission. Selected topics or subject areas of interest in respiratory therapy technology.

## GENERAL TECHNOLOGY

### 2820:

- 100 INTRODUCTION TO ENGINEERING TECHNOLOGY** 2 credits  
Introductory course describing various engineering technologies in terms of job skills, nature of careers, and employment opportunities. Overview of technical terminology.
- 105 BASIC CHEMISTRY** 3 credits  
Elementary treatment of facts and principles of chemistry emphasizing biological application. Elements and compounds important in everyday life, biological processes and medicine. Introduction to laboratory techniques. Primarily for medical assistant, criminal justice and allied health students. Laboratory.
- 110 PHYSICAL SCIENCE FOR TECHNICIANS** 3 credits  
Elementary presentation of theory and facts of general chemistry and physics (excluding electricity). Includes atomic structure, chemical reactions, energy, electromagnetic radiation, sound and mechanics.
- 111 INTRODUCTORY CHEMISTRY** 3 credits  
Facts and theories of general chemistry. Elements and compounds and their uses. Elementary treatment of atomis structure, gaseous state, periodic table, water, solutions. For polymer technology and bachelor of technology students. Laboratory.
- 112 INTRODUCTORY AND ANALYTICAL CHEMISTRY** 3 credits  
Prerequisite: 111 or permission. Chemical equilibria, ionization, radioactivity. Properties of selected metals and nonmetals. Introduction to organic chemistry. Basic concepts of qualitative analysis. Identifications of cations and anions. Laboratory.
- 121 TECHNICAL COMPUTATIONS** 1 credit  
Prerequisite: 2030:151; corequisite for drafting technology students only; 2940:151. Use of computer to solve typical problems in engineering technology. Concepts of flow charting, looping, variables, arrays, subroutines examined. BASIC computer language introduced.
- 131 SOFTWARE APPLICATIONS FOR TECHNOLOGY** 1 credit  
Prerequisite: 2030:151. Emphasis will be on spreadsheets and databases to solve technical problems and incorporate results in technical reports. Limited to Engineering and Science Technology students.
- 161 TECHNICAL PHYSICS: MECHANICS I** 2 credits  
Corequisite: 2030:152. Principles of mechanics. Topics include force vectors, laws of motion, work-energy relationships, and equilibrium. Laboratory.
- 162 TECHNICAL PHYSICS: MECHANICS II** 2 credits  
Prerequisite: 161; corequisite: 2030:153. Principles of mechanics. Topics include motion in a plane, momentum, rotation, harmonic motion, and sound laboratory.
- 163 TECHNICAL PHYSICS: ELECTRICITY AND MAGNETISM** 2 credits  
Prerequisites: 161; corequisite: 2030:153. Principles of electricity and magnetism. Electrostatics, basic direct current circuits, magnetism and electromagnetism, alternating currents, basic AC circuits. Laboratory.
- 164 TECHNICAL PHYSICS: HEAT AND LIGHT** 2 credits  
Prerequisites: 161 and 2030:153. Topics include thermal behavior of matter, thermodynamics, light, geometric and physical optics. Introduction to atomic and nuclear physics.
- 290 SPECIAL TOPICS: CHEMICAL TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits.) Prerequisite: Permission. Selected topics or subject areas of interest in Chemical Technology.
- 310 PROGRAMMING FOR TECHNOLOGISTS** 2 credits  
Prerequisites: 121 and 2030:153. Introduction to structured Fortran 77 programming and Hewlett-Packard computer system. Emphasis on programming to solve technical problems. Limited to students in Engineering and Science Technology Division.

## ELECTROMECHANICAL SERVICE TECHNOLOGY (Inactive)

### 2830:

- 110 ELECTROMECHANICAL DEVICES** 4 credits  
Prerequisite: 2860:110. Application-oriented study of electromagnetic sensors and the electronic devices and circuits used to implement industrial control sensors.
- 130 INTRODUCTION TO HYDRAULICS AND PNEUMATICS** 3 credits  
Principles of hydrostatic forces, pressure, density, viscosity, incompressible and compressible fluids. Principles of hydraulic and pneumatic devices and systems.
- 210 MOTION CONTROL I** 4 credits  
Prerequisite: 2830:110. Principles, applications, and troubleshooting of AC and DC electric generators and motors. Introduction to basic mechanical and motion control.
- 220 MOTION CONTROL II** 3 credits  
Prerequisite: 2830:210. Integration of basic devices with the speed and position controlling systems for DC and AC motors, servomotors, stepper motors, and hydraulic valves and cylinders.
- 230 MACHINE AND PROCESS CONTROL** 4 credits  
Prerequisite: 2830:110. Introduction to the integration of control components into a complete industrial machine or process control system. Study of the types of systems and the required documentation.

- 240 INDUSTRIAL COMPUTER CONTROL** 3 credits  
Prerequisite: 2830:110. Introduction to digital electronics as it applies to industrial control. Survey of number systems, basic digital devices, microprocessors, microcomputer-based control components.
- 250 PROGRAMMABLE CONTROLLERS** 3 credits  
Prerequisite: 2830:230. Principles of operation, application, and troubleshooting of programmable controllers. Includes programming of ladder logic systems.
- 280 ELECTRICAL POWER AND WIRING** 3 credits  
A study of electrical power distribution, residential, commercial, industrial wiring, and electrical safety. Emphasis on the requirements of the National Electrical Code.
- 270 TROUBLESHOOTING AND REPAIR PRACTICES** 3 credits  
Prerequisite: 2830:210, 230. Surveys mechanical, hydraulic, pneumatic, electrical, and electronic troubleshooting and repair practices. Problem isolation, repair, and shop practices are considered. Safety practices are emphasized.

## POLYMER TECHNOLOGY

### 2840:

- 111 POLYMER TECHNOLOGY I** 3 credits  
Introduction to chemical and physical structure, properties and applications of polymers. Interaction between materials properties, product design and processing. Characterization of the major processes.
- 112 POLYMER TECHNOLOGY II** 3 credits  
Prerequisite: 111. This course emphasizes the processing of thermoplastics and thermosetting plastics. The laboratory introduces students to some of the major processes and equipment operation.
- 202 INSTRUMENTAL METHODS** 4 credits  
Prerequisites: 2820:111, 2840:111, 2860:110. Instrumentation employed in qualitative and quantitative analysis. Theory and practice in chromatographic, spectrophotometric and other instrumental methods. Laboratory.
- 211 POLYMER TECHNOLOGY III** 3 credits  
Prerequisites: 2820:131, 2840:101, 112. This course emphasizes the testing and characterization of materials used in polymer product fabrication, and the testing and analysis of finished polymer products.
- 220 CASE STUDIES IN POLYMER DESIGN AND PROCESSING** 2 credits  
Prerequisite: 211. Combines study of polymer properties, processing, and design guidelines to analyze complete manufacturing, testing, and quality assurance programs. Examples of significant applications analyzed in detail.
- 280 COMPOUNDING METHODS** 2 credits  
Prerequisites: 102, 121 or permission. Principles and methods of selecting and compounding rubber for specific end uses. The compounder's art. Processing and testing of basic elastomers and products. Laboratory.
- 270 NATURAL AND SYNTHETIC ORGANIC POLYMERS** 4 credits  
Prerequisite: 121 or permission. Structure and properties of macromolecules with particular reference to carbohydrates, proteins, nucleic acids, rubber, synthetic thermoplastic, thermosetting and elastomeric polymers.
- 281 POLYMER LAB PROJECT** 2 credits  
Prerequisite: 211. Student teams, choosing their own projects, design a polymeric product, select materials, processes, and simulate design and development of the product. Individual final reports required.
- 290 SPECIAL TOPICS: POLYMER TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits.) Prerequisite: permission. Selected topics or subject areas of interest in chemical technology.

## ELECTRONIC ENGINEERING TECHNOLOGY

### 2860:

- 110 BASIC ELECTRICITY AND ELECTRONICS** 4 credits  
Prerequisite: 2030:130 or equivalent. Principles of electronics: resistors, inductance, capacitance, transistors, microprocessors, power sources, motors, generators, test equipment, circuit diagnosis, troubleshooting. Credit not applicable toward the A.A.S. in Electronic Technology.
- 120 DC CIRCUITS** 4 credits  
Corequisite: 2030:152, 153. Nature of electricity, SI units, current and voltage, Ohm's Law, network analysis, Thevenin's Theorem, inductor, capacitor, transients, DC instruments, measurements, laboratory support of circuit concepts.
- 122 AC CIRCUITS** 3 credits  
Prerequisite: 120; corequisites: 2030:154 and 2820:121. Sinusoidal voltage and current, reactance and impedance, methods of AC circuit analysis, AC power, transformers, AC meters and oscilloscopes, dependent and independent sources.
- 123 ELECTRONIC DEVICES** 3 credits  
Corequisite: 122. Physical theory, characteristics and operational parameters of solid-state electronic devices. Analysis and design of electronic circuits incorporating these devices, utilizing characteristic curves and linear modeling.
- 136 INTRODUCTION TO DIGITAL CONCEPTS** 1 credit  
Prerequisite: 120. Introduction to devices and techniques used in the design of combinational logic circuits. Topics include number systems, various arithmetic codes, Boolean algebra and Karnaugh mapping.
- 225 ELECTRONIC DEVICES APPLICATIONS** 4 credits  
Prerequisite: 123. Electronic amplifiers, power amplifiers, Classes A and B. Frequency response, Bode plots. Differential amplifiers. Operational amplifiers. Power supplies, filters and regulators. Feedback and oscillators.
- 227 MEASUREMENTS** 2 credits  
Prerequisite: 123 or 271. Principles and use of electrical and electronic instruments including moving coil instruments, bridges, oscilloscopes and signal generators. Analysis of measurement errors.
- 31 CONTROL PRINCIPLES** 3 credits  
Prerequisites: 225, 2030:255. Principles and design for control of physical systems. Mathematical and analog computer modeling of physical systems. Principles of closed-loop control systems. Design of simple servomechanisms.
- 237 DIGITAL CIRCUITS** 4 credits  
Prerequisites: 123 and 136. Introduction to devices used in design of logic circuits. Topics include logic families, flip flops, counters, shift registers multiplexers, demultiplexers, arithmetic circuits, and memories.
- 238 MICROPROCESSOR FUNDAMENTALS** 4 credits  
Prerequisite: 237. Principles and architecture of microprocessor and memory. Assembly language programming, microprocessor bus and interface applications are investigated. Techniques for hardware and software debugging.
- 242 MACHINERY AND CONTROLS** 4 credits  
Prerequisites: 122 and 123 or 271. Principles, characteristics and applications of DC and AC generators and motors. Basic control circuits for rotating machinery. Principles of industrial electronic devices. Introduction into programmable controllers.
- 251 COMMUNICATIONS CIRCUITS** 3 credits  
Prerequisite: 225. Resonance, coupling, filters, oscillators, mixers, power amplifiers, AM, FM, receivers.
- 255 ELECTRONIC DESIGN AND CONSTRUCTION** 2 credits  
Prerequisite: 123. Drafting fundamentals. Printed circuit board layout. Shop safety practices. Tool care and use. Chassis and sheet metal layout and fabrication; metal finishing, packaging techniques.
- 260 ELECTRONIC PROJECT** 2 credits  
Prerequisites: final semester or permission and 255. Design, construction and testing of an electronic circuit of choice. Progress reports, oral and written reports required. Discussion of electronic design and fabrication techniques.
- 270 SURVEY OF ELECTRONICS I** 3 credits  
Prerequisite: 2820:163. Fundamentals of DC and AC electrical circuits and rotating machinery. For non-electronic technology majors.
- 271 SURVEY OF ELECTRONICS II** 3 credits  
Prerequisite: 270; corequisite: 2020:132. Survey of the most commonly used solid-state circuit components including typical applications. Introduction into digital circuits and microprocessor applications. For non-electronic technology majors.
- 290 SPECIAL TOPICS: ELECTRONIC TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits.) Prerequisite: permission. Selected topics of subject areas of interest in Electronic Technology.
- 350 ADVANCED CIRCUIT THEORY** 3 credits  
Prerequisite: 225, 231. Corequisite: 2020:334. Nodal, mesh, Thevenin, and dependent sources in resistive circuits. Inductor and capacitor as time domain elements. First- and second-order circuit analysis. Phasor analysis. Operational amplifier analysis.
- 352 MICROPROCESSOR SYSTEMS** 4 credits  
Prerequisite: 238; corequisite: 350. Study of microprocessors and microcomputers, topics in architecture, assembly language, software, operating systems, I/O interface circuits. Specific systems studied include the 8088 and the IBM PC.

- 354 ADVANCED CIRCUIT APPLICATIONS** 4 credits  
Prerequisites: 350; 2030:356; and 3460:201 or 3460:205 or 2820:310. Introduction to PSPICE. Calculating electrical power. Series and parallel resonance. LaPlace transforms in operational circuit analysis. Transfer functions, impulse function, Bode diagrams, Fourier Series.
- 400 COMPUTER SIMULATIONS IN TECHNOLOGY** 3 credits  
Prerequisites: 2860:354, 2030:345, 3460:201 or 205 or 2820:310. Software simulation of electronic circuits. Production of circuits is simulated using random generation of components. Output is presented using both 2- and 3- dimensional techniques.
- 406 COMMUNICATION SYSTEMS** 3 credits  
Prerequisites: 251 and 350. Digital communications, transmission lines, waveguides, microwave devices and antennas.
- 420 BIOMEDICAL ELECTRONIC INSTRUMENTATION** 3 credits  
Prerequisite: 354. Introduction to electrical signals from the body, transducers, recording devices, telemetry, microprocessor applications, and electrical safety of medical equipment.
- 430 SENIOR TOPICS IN ELECTRONIC TECHNOLOGY** 3 credits  
Prerequisites: 354, 400. Study of advanced topics in electronic technology.
- 451 INDUSTRIAL ELECTRICAL SYSTEMS** 3 credits  
Prerequisites: 354, 3460:201 or 205 or 2820:310. Electric power, industrial nameplates, power factor correction, mutual inductance, linear transformers, power transformers, polyphase systems, per-phase analysis, system grounding, protective device coordination computer-aided analysis.
- 453 CONTROL SYSTEMS** 4 credits  
Prerequisites: 231, 354. Modeling and responses of closed-loop systems. LaPlace transforms, root-locus analysis. Stability, compensation, digital control, optimal control. Digital computer in system simulation and design.
- 497 SENIOR HONORS PROJECT: ELECTRONIC TECHNOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program, permission of department preceptor and major in electronic technology. Independent research leading to completion of Senior Honors Thesis or other original work.

## AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

### 2870:

- 301 COMPUTER CONTROL OF AUTOMATED SYSTEMS** 3 credits  
Prerequisite: 2880:201, 2820:121 or permission. The development of computer based systems and computer programs using robotics and machine controllers as the solutions for automated manufacturing problems.
- 311 COMPUTER-AIDED DRAFTING II** 2 credits  
Prerequisite: 2940:210. Computerized plant layout and design.
- 420 MATERIALS AND PROCESSES** 2 credits  
Prerequisite: 2920:347. A study of part production from the aspect of the proper selection of materials and processes.
- 470 SIMULATION OF MANUFACTURING SYSTEMS** 2 credits  
Prerequisite: 2880:211. Computer simulation solutions applied to the traditional manufacturing problems of equipment justification and line balancing.
- 480 AUTOMATED PRODUCTION** 2 credits  
Prerequisites: 410, 6500:301, 2920:448. A study of the automated production system. The various topics studied thus far CAD, CNC, and management are integrated. Several companies are used as case studies.
- 490 MANUFACTURING PROJECT** 2 credits  
Prerequisite: Final semester. Advanced CAD/CAM topics are presented. A comprehensive project is undertaken.

## MANUFACTURING ENGINEERING TECHNOLOGY

### 2880:

- 100 BASIC PRINCIPLES OF MANUFACTURING MANAGEMENT** 4 credits  
A survey of basic concepts of management and their interrelationships to a manufacturing environment. Includes production control, quality control, work measurement, and employee motivation.
- 110 MANUFACTURING PROCESSES** 2 credits  
Study of the machines, methods, and processes used in manufacturing.
- 130 WORK MEASUREMENT AND COST ESTIMATING** 3 credits  
Prerequisite: 100. Time and motion study. Development of accurate work methods and production standards, and their relationship to manufacturing cost estimates.
- 151 INDUSTRIAL SAFETY AND ENVIRONMENTAL PROTECTION** 2 credits  
A contemporary overview of the science and management of occupational health and safety programs, policies, and procedures in an industrial and business type environment.

- 201 ROBOTICS AND AUTOMATED MANUFACTURING** 3 credits  
Prerequisite: 100 or permission of instructor. Study of manufacturing automation and the computer-based products and processes available for this task. Robots, machine controllers, and machine/process interfaces are investigated.
- 210 CONTROLLING AND SCHEDULING PRODUCTION** 2 credits  
Prerequisite: 100. Production order followed from sales order through requisitioning, plant loading, expediting, scheduling and shipping. Also covers material control and inventory record keeping. Critical path, linear programming and EDP techniques discussed.
- 211 COMPUTERIZED MANUFACTURING CONTROL** 3 credits  
Prerequisite: 100. Processing of production order by computer through requisitioning, plant loading, expediting, scheduling and shipping of product. Creation on computer of material requisitions, plant schedules, sent-to-stocks and shipping orders as by-products of processing production order.
- 221 SURVEY OF MACHINE TOOLS & CNC MACHINERY** 3 credits  
Introductory study of the machining process. Basic concepts start with engine lathe and mill and proceed through beginning CNC programming.
- 222 COMPUTER NUMERICALLY CONTROLLED MANUFACTURING** 3 credits  
Prerequisite: 2880:110, 2030:255. CNC programming for CNC mills and lathes. Includes machine setup, tool selection as well as feed and speed calculations.
- 231 PLANT LAYOUT** 3 credits  
Prerequisite: 100. Solution of activities for a production facility. Optimum arrangements of factors of production: manpower, materials, and equipment.
- 232 LABOR MANAGEMENT RELATIONS** 3 credits  
Prerequisite: 100. Study of historical background of labor movement, management viewpoints, legal framework for modern labor organizations and collective bargaining process.
- 241 INTRODUCTION TO QUALITY ASSURANCE** 3 credits  
Prerequisite: 100 and 2030:152. Theory and practice of inspection and sampling techniques for measurement of quality, QC charts, sampling plans, mill specs, checking machine capabilities, and setting tolerances.
- 290 SPECIAL TOPICS: MANUFACTURING TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in industrial technology.

## INSTRUMENTATION TECHNOLOGY

### 2900:

- 121 FUNDAMENTALS OF INSTRUMENTATION** 4 credits  
Prerequisites: 2820:151 and 2860:123 or 2860:270. Study of variables encountered in process instrumentation, indicating and recording devices and applications of physical principles affecting measurement and control.
- 232 PROCESS CONTROL** 3 credits  
Prerequisite: 2860:231. Study of analysis and design of process control systems with emphasis on techniques and instrumentation used in process control. Digital control fundamentals introduced.
- 239 PULSE CIRCUIT TESTING** 3 credits  
Prerequisite: 2860:237. General study and analysis of digital circuits and systems. Analog-to-digital and digital-to-analog conversion. Digital troubleshooting and analysis of digital interface.
- 240 CALIBRATION AND STANDARDIZATION** 1 credit  
Prerequisite: 2860:231. Laboratory experience in calibration and standardization of electrical, electronic and mechanical systems. Instrument theory, maintenance, troubleshooting, specifications, performance, and safe working practices included.
- 241 INSTRUMENTATION PROJECT** 2 credits  
Prerequisite: final semester or permission. Design construction and testing of an approved instrumentation project by an individual student, promoting independent study, initiative, assumption of responsibility, and application of skills attained in related courses.
- 290 SPECIAL TOPICS: INSTRUMENTATION TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in instrumentation technology.

## MECHANICAL ENGINEERING TECHNOLOGY

### 2920:

- 101 INTRODUCTION TO MECHANICAL DESIGN** 2 credits  
Prerequisite: 2940:121; corequisite: 2030:154. Topics in engineering drawing: conventions, sections, dimensioning, allowances and tolerances, assembly drawings. Practice dimensional conversions, spreadsheets, test planning, data reduction. Discuss technical ethics and responsibilities.
- 110 FUNDAMENTAL SCIENCE FOR AUTOMOTIVE TECHNOLOGY** 4 credits  
Prerequisite: 2030:130 with grade C or better. Scientific relationships of automotive systems: force, work, energy, friction, fluid properties, and thermodynamic principles of the engine. Credit not applicable toward the A.A.S. in Mechanical Technology.
- 142 INTRODUCTION TO MATERIAL TECHNOLOGY** 3 credits  
Fundamental properties of materials. Material testing. Applications of methods to control material properties.
- 243 KINEMATICS** 2 credits  
Prerequisite: 101 and 2980:125. Study of rigid-body motions of simple linkages, cams, gears and gear trains. Graphical vector solutions emphasized. Industrial applications presented.
- 244 DYNAMICS** 2 credits  
Prerequisites: 142, 2940:210, 2980:241. Introduction to particle dynamics, displacement, velocity and acceleration of a constrained rigid body in plane motion. Kinetics of particles and rigid bodies; work and energy, mechanical vibrations.
- 245 MECHANICAL DESIGN II** 5 credits  
Prerequisites: 101, 201, 142. Design of machine elements: springs, shafts, fasteners, welded joints. Combined stress and fatigue analysis. Design projects. Experimental stress analysis.
- 247 TECHNOLOGY OF MACHINE TOOLS** 3 credits  
Set up and operation of tool room machines: lathe, drill press, shaper, milling machine, and tool grinder. Planning operations and layout.
- 249 APPLIED THERMAL ENERGY I** 2 credits  
Prerequisites: 2030:255, 2820:164. Thermodynamic principles. Study of power cycles. Applications in I.C. engines, compressors, steam power cycles, refrigeration.
- 251 FLUID POWER** 2 credits  
Prerequisites: 2820:162, 164. Statics and dynamics of fluids. Viscosity, energy and momentum relationships. Fluid machinery and measurements.
- 252 THERMO-FLUIDS LABORATORY** 1 credit  
Prerequisite: 251; corequisite: 249. Laboratory experiments in applied thermal energy and fluid power.
- 290 SPECIAL TOPICS: MECHANICAL TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in mechanical technology.
- 310 ECONOMICS OF TECHNOLOGY** 3 credits  
Prerequisite: 64 credits or permission. Economic principles as they pertain to technology. Equivalence, alternatives, costs, depreciation, valuation. Project studies.
- 335 WELDING, THEORY AND PRACTICE** 3 credits  
Prerequisite: 142. Design of weldments and welding processes. Welding of ferrous, nonferrous and plastic materials.
- 336 WELDING PROJECTS** 1 credit  
Prerequisite: 335. Individual projects containing elements of analysis, design and laboratory implementation.
- 339 ADVANCED TECHNOLOGY OF MACHINE TOOLS** 2 credits  
Prerequisite: 247, 142. Selected topics dealing with sophisticated metal cutting techniques.
- 346 MECHANICAL DESIGN III** 4 credits  
Prerequisites: 244, 245, 2820:310. Continuation of design of mechanical components: gears, bearings, brakes, and clutches. Special topics presented will be coordinated with assigned design projects.
- 347 APPLICATIONS OF MATERIAL TECHNOLOGY** 3 credits  
Prerequisites: 247 and 2030:356. Study of modern production machines, processes, and techniques. Casting, forging, rolling, welding, powder metallurgy, plastics molding.
- 348 CNC PROGRAMMING I** 3 credits  
Prerequisites: 2940:121, 2030:154. Introduction to numerical control (N/C) of operation of machine tools and other processing machines. Includes programming, types of N/C systems, economic evaluation.
- 360 FUNDAMENTALS OF AUTOMOTIVE SYSTEMS** 3 credits  
Prerequisite: 249. System function and interaction of various subsystems. Diagnosis of malfunction of important systems and use of instruments such as vacuum gauge, compression and cylinder leakage test gauges, dwell meter and ignition scope. Laboratory demonstrations with hands-on experience for student dependent on available laboratory time. Field trips to observe operation of computer controlled testing and diagnosis.
- 365 APPLIED THERMAL ENERGY II** 3 credits  
Prerequisites: 249, 251. Basic design knowledge of heating and air conditioning. Includes basic heat transfer concepts, heat loss and gain of buildings, human reactions to conditioned atmosphere, heating and cooling load requirements, and variations in type of performance of heating and cooling equipment.
- 370 PLASTICS DESIGN AND PROCESSING** 3 credits  
Prerequisites: 142, 2840:101, and 2980:241, or permission. Introduction to structure and properties of polymers, selection based on properties and cost, design of products and tools, basic principles of the major processes.

- 402 MECHANICAL PROJECTS** 1 credit  
Prerequisite: senior standing. Individual projects emphasizing creative technical design.
- 405 INDUSTRIAL MACHINE CONTROL** 3 credits  
Prerequisite: 2860:270. Principles and design of industrial machine control systems. Application oriented study of typical control devices. Utilization of programmable controllers as the system logic controllers.
- 448 CNC PROGRAMMING II** 3 credits  
Prerequisite: 348. Introduction to computer-assisted interactive part programming system. Writing of milling and drilling programs.
- 460 MECHANICAL SIMULATION** 3 credits  
Prerequisite: 2820:310. Structural, thermal and dynamic aspects of mechanical systems simulated using FORTRAN. Performances studied using both deterministic and trial-and-error methods. Responses in both time and frequency domains to various forcing functions. Prediction of tolerances and performance specifications by statistically studying systems produced by simulated production line.
- 470 PLASTICS PROCESSING AND TESTING** 2 credits  
Prerequisites: 370 or permission. Use of basic polymer testing methods. Setup and operation of modern molding and extrusion equipment. Basic troubleshooting procedures. Study of processing effects on final properties.
- 497 SENIOR HONORS PROJECT IN MECHANICAL TECHNOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program, permission of area honors preceptor and major in mechanical technology. Independent research leading to completion of senior honors thesis or other original work.

## DRAFTING AND COMPUTER DRAFTING TECHNOLOGY

### 2940:

- 121 TECHNICAL DRAWING I** 3 credits  
Corequisite: 210. Lettering and proper use of drawing instruments; freehand sketching; geometric drawing; orthographic projection; auxiliary views, sections, pictorials; introduction to basic descriptive geometry.
- 122 TECHNICAL DRAWING II** 3 credits  
Prerequisite: 121, 210. Covers dimensioning; allowances and tolerances; geometric tolerancing; threads and fasteners; descriptive geometry; intersections; developments; and computer applications.
- 140 SURVEY OF ENGINEERING TECHNOLOGY** 3 credits  
Prerequisite: 2030:151. Introductory course in basic concepts pertaining to mechanical, civil and electrical technology. A study of technical terminology, and applied math. Graphical solutions will be emphasized.
- 150 DRAFTING DESIGN PROBLEMS** 2 credits  
Prerequisite: 2030:152; corequisite: 2820:121. Introductory course in basic concepts in engineering technology computations. A study of technical terminology and applied mathematics.
- 170 SURVEYING DRAFTING** 3 credits  
Prerequisite: 121; corequisite: 2030:152. Drafting procedures, techniques and tools required for the various phases of survey office work. Projects in topographic maps, plan and profile drawings, and cross-section drawings.
- 180 INTRODUCTION TO COMPUTER AIDED DRAFTING** 1 credit  
Drafting techniques using AutoCAD. Topics include drawing, editing, dimensioning, plotting, layers, and text. Credit not applicable toward the A.A.S. in Drafting Technology.
- 200 ADVANCED DRAFTING** 3 credits  
Prerequisite: 122. Principles of descriptive geometry applied to practical problems pertaining to the civil and mechanical fields of technology.
- 210 COMPUTER AIDED DRAWING I** 3 credits  
Corequisite: 121. Drafting procedures and techniques used for creating drawings using AutoCAD software. Topics include basic components, drawing, editing, dimensioning, layers, text blocks, plotting, and hatch.
- 211 COMPUTER AIDED DRAWING II** 3 credits  
Prerequisite: 2940:210. Continuation of 2940:210. Deals with computer-aided drafting applications. Electrical/electronic, mechanical, construction, and architectural examples are studied.
- 230 MECHANICAL SYSTEMS DRAFTING** 3 credits  
Prerequisite: 122. Drawing fundamentals and terminology of welding, gears, cams, piping, sheet metal, and fluid power drawings.
- 240 ELECTRICAL AND ELECTRONIC DRAFTING** 3 credits  
Corequisite: 122. Drafting fundamentals, terms, and symbols required for electrical, electronics, and instrumentation drawings. Included are interconnecting diagrams, PC boards, and architectural and industrial plans.
- 250 ARCHITECTURAL DRAFTING** 3 credits  
Prerequisite: 121. Drawing fundamentals, terminology, and symbols for developing a set of basic construction plans and details. Included also are presentation drawings and interior and exterior planning.
- 260 DRAFTING TECHNOLOGY PROJECT** 3 credits  
Prerequisite: Completion of 20 credits of 2940. Provides opportunity to research and develop a specific drafting project within chosen field of interest.
- 290 SPECIAL TOPICS: DRAFTING TECHNOLOGY** 1-3 credits  
(May be repeated for a total of three credits) Prerequisite: permission. Selected topics on subject areas of interest in drafting technology.

## SURVEYING AND CONSTRUCTION ENGINEERING TECHNOLOGY

### 2980:

- 122 BASIC SURVEYING** 3 credits  
Basic tools and computations for surveying; measurements of distance, elevations and angles; traverse surveys. Field practice.
- 123 SURVEY FIELD PRACTICE** 2 credits  
Prerequisite: 122. Practical experience in use of surveying equipment and methods of surveying. Provides student with responsibility for making decisions and planning and directing complete project.
- 125 STATICS** 3 credits  
Prerequisites: 2820:161 and 2030:153. Forces, resultants and couples. Equilibrium of force systems. Trusses, frames, first and second moment of areas, friction.
- 222 CONSTRUCTION SURVEYING** 3 credits  
Prerequisite: 122. Methods and procedures for establishing line and grade for construction. Circular, spiral and parabolic curves. Cross-sectioning methods and earthwork. Field practice.
- 224 LAND SURVEYING** 3 credits  
Prerequisite: 122 or permission. Historical development of boundaries, rectangular system of public land surveys, systems to describe property, working and interpretation of deed descriptions, surveyor's rights, duties and responsibilities. THIS COURSE IS CURRENTLY INACTIVE.
- 225 ADVANCED SURVEYING** 4 credits  
Prerequisite: 122. Introduction to theory of errors, precise leveling, baseline measurements, triangulation, trilateration and bearings from celestial observation. Photogrammetry. Field practice. THIS COURSE IS CURRENTLY INACTIVE.
- 226 SUBDIVISION DESIGN** 2 credits  
Prerequisite: 222; corequisite: 224. Site analysis, land use controls and plotting procedures. Laboratory includes preparation of various types of projects leading to a complete subdivision. THIS COURSE IS CURRENTLY INACTIVE.
- 231 BUILDING CONSTRUCTION** 2 credits  
Materials and types of construction used in heavy construction. Encompasses buildings constructed with heavy timber, steel, concrete or a combination of these materials.
- 232 CONSTRUCTION** 3 credits  
Prerequisite: 222. Planning of construction operations. Construction equipment and selection for typical jobs. Emphasis on heavy construction.
- 234 ELEMENTS OF STRUCTURES** 3 credits  
Prerequisite: 241. Principles of stress and structural analysis of members in steel, timber and concrete.
- 237 MATERIALS TESTING I** 2 credits  
Laboratory testing of soils with emphasis on physical properties of soil. Laboratory and field procedures used for quality control. Testing of concrete mixes.
- 238 MATERIALS TESTING II** 2 credits  
Prerequisite: 237; corequisite: 241. Mix design of concrete. Laboratory testing of ferrous and nonferrous metals, woods and concrete. Experiments demonstrate physical properties as related to design.
- 241 STRENGTH OF MATERIALS** 3 credits  
Prerequisite: 125. Stress, strain and stress-strain relationships. Tension, compression, torsion, beams. Shear and moment diagrams.
- 245 COST ANALYSIS AND ESTIMATING** 3 credits  
Quantity surveys in construction. Elements of cost in construction, determination of unit costs, analysis of cost records.
- 250 STRUCTURAL DRAFTING** 2 credits  
Prerequisite: 2940:121. Duties of structural draftsman in preparation of detailed working drawings for steel and concrete. Emphasis on portrayal, dimensions and notes on a working drawing.
- 290 SPECIAL TOPICS: SURVEYING AND CONSTRUCTION TECHNOLOGY** 1-2 credits  
Prerequisite: permission. Selected topics or subject areas of interest in surveying and construction technology.

# Buchtel College of Arts and Sciences

## COOPERATIVE EDUCATION

### 3000:

- 301 COOPERATIVE EDUCATION** *0 credits*  
(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

### INTERDISCIPLINARY PROGRAM

## WOMEN'S STUDIES

### 3001:

- 100 SOCIAL AND CULTURAL DIVERSITY IN THE U.S.** *3 credits*  
Explores the range and impact of pluralistic experience in the U.S. emerging from differences in race, class, ethnicity, gender, age, ability, and sexual orientation.
- 110 MULTICULTURAL SENSITIVITY TRAINING** *1 credit*  
Introductory course designed to teach awareness and skills necessary for coping with and appreciating diversity of race, class, gender, ethnicity, and sexual orientation.
- 300 INTRODUCTION TO WOMEN'S STUDIES** *3 credits*  
Introduction to the interdisciplinary program in Women's Studies. Explores current scholarship in women's issues and experiences from perspectives of psychology, history, sociology, anthropology, and literary criticism. Feminist orientation and methodology.
- 485/585 SPECIAL TOPICS IN WOMEN'S STUDIES** *1-3 credits*  
(May not be repeated). Special topics and current issues in Women's Studies. Covers content not currently addressed in other courses. Fosters a critical approach to knowledge about women.
- 490/590 WORKSHOP** *1-3 credits*  
(May not be repeated). Various topics focused on women. Themes and course materials vary each semester. Lecture and discussion.
- 493 INDIVIDUAL STUDIES ON WOMEN** *1-3 credits*  
Prerequisite: 300, and approval of Director of Women's Studies. Directed study of selected topics related to women. Projects are chosen by student in consultation with instructor.

### INTERDISCIPLINARY PROGRAM

## AFRICAN-AMERICAN STUDIES

### 3002:

- 301 THE CIVIL RIGHTS MOVEMENT IN AMERICA: 1945-1974** *3 credits*  
Social and political actions, events and environment which produces civil rights movement in America. Legal, political and organizational strategies; philosophical arguments; prominent civil rights activists.
- 401 GENERAL SEMINAR IN AFRICAN-AMERICAN STUDIES** *3 credits*  
Prerequisite: 3400:220 or permission. Exploration and intensive examination of variety of issues related to role and minority group relations which normally stand outside the compass of any one subject matter area.
- 420 SPECIAL TOPICS IN AFRICAN-AMERICAN STUDIES** *1-3 credits*  
(May be repeated for a maximum of three semester credits). Prerequisite: permission of instructor.

### INTERDISCIPLINARY PROGRAM

## PEACE STUDIES

### 3003:

- 230 INTRODUCTION TO CONFLICT MANAGEMENT/RESOLUTION** *3 credits*  
Examination of the theoretical foundations of conflict and conflict management/resolution tactics to provide a sound and common intellectual framework for the systematic analysis and application of conflict methodologies.
- 300 SPECIAL TOPICS IN PEACE STUDIES** *1-3 credits*  
See Schedule of Classes for current subject. (May be repeated for a total of three credits.) Interdisciplinary topics related to peace studies.

- 301 VALUE CONCEPTS ON PEACE AND WAR** *3 credits*  
Interdisciplinary study of attitudes, concepts and realities regarding war and peace issues.
- 350 INDEPENDENT STUDY** *1-3 credits*  
(May be repeated for a total of three credits) Prerequisite: Approval of Director of Peace Studies. Detailed study on selected topics related to peace.
- 378 INTRODUCTION TO HUMAN RIGHTS CONCEPTS** *3 credits*  
Interdisciplinary and cross-cultural survey of basic concepts of human rights as recognized by international law. Limitations and future issues are raised.
- 382 THE VIETNAM WAR** *3 credits*  
An examination and evaluation of political, military, diplomatic, and economic impact of the Vietnam War.
- 390 WORKSHOP IN PEACE STUDIES** *1-3 credits*  
(May be repeated for a total of four credits) Group studies in peace and war-related subjects and issues.
- 430 INTEGRATIVE APPROACHES TO CONFLICT MANAGEMENT/RESOLUTION** *3 credits*  
Prerequisite: 230. Comparison and workshop applications of strategies and concepts of conflict management/resolution.

### INTERDISCIPLINARY PROGRAM

## CANADIAN STUDIES

### 3005:

- 300 CANADIAN STUDIES: AN INTERDISCIPLINARY APPROACH** *3 credits*  
This course provides historical, political, geographical, sociological, and literary overviews for students pursuing a certificate in Canadian studies. Team-taught.

### INTERDISCIPLINARY PROGRAM

## INSTITUTE FOR LIFE-SPAN DEVELOPMENT AND GERONTOLOGY

### 3006:

- 450 INTERDISCIPLINARY SEMINAR IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY** *2 credits*  
(May be repeated for a total of two credits) Prerequisite: permission of instructor. Introduction to interdisciplinary study of gerontology including discussion of dimensions of aging, historical framework of aging in America, demographics, service systems, and current issues.
- 485 SPECIAL TOPICS** *1-3 credits*  
Prerequisite: permission of instructor. Specialized topics and current issues in life-span development or gerontology. Covers content or issues not currently addressed in other academic courses.
- 486/686 RETIREMENT SPECIALIST** *2 credits*  
An investigation of issues related to the design and implementation of pre-retirement planning and examination of life-span planning education as employed by labor, business and education.
- 490 WORKSHOP** *1-3 credits*  
(May be repeated) Group studies of special topics in life-span development and gerontology. May not be used to meet certificate requirements. May be used for elective credit only.
- 495 PRACTICUM IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY** *1-3 credits*  
(May be repeated) Prerequisite: permission. Supervised experience in research or community agency work.

### INTERDISCIPLINARY PROGRAM

## ENVIRONMENTAL STUDIES

### 3010:

- 201 SOCIETY AND THE ENVIRONMENT** *2 credits*  
Study of our relationship with nature, our dependence upon the environment and control over it. An interdisciplinary approach, with lecturers from various University departments, government, and industry describing their approaches to the environment.
- 401 SEMINAR IN ENVIRONMENTAL STUDIES** *2 credits*  
Specific environmental topic or topics from interdisciplinary viewpoint each semester. The director of Environmental Studies coordinates course; resource persons are drawn from the University and surrounding community.
- 490/590 WORKSHOP IN ENVIRONMENTAL STUDIES** *1-4 credits*  
Prerequisite: varies with topic. Credit in graduate program must have prior approval of adviser. Skills, attitudes and fundamental concepts dealing with timely environmental problems and issues covered. Instruction under direction of University faculty.

**BIOLOGY****3100:**

- 100 NATURE STUDY: PLANTS** 3 credits  
Identification and biology of common plants of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.
- 101 NATURE STUDY: ANIMALS** 3 credits  
Identification and biology of common animals of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.
- 103 NATURAL SCIENCE: BIOLOGY** 4 credits  
Designed for non-science majors. Laboratory and class instruction illustrate concepts of living organisms with emphasis on mankind's position in, and influence on, the environment.
- 104 INTRODUCTION TO ECOLOGY LABORATORY** 1 credit  
Corequisite: 105. Short field trips and laboratory studies illustrating natural and modified characteristics of selected local ecosystems.
- 105 INTRODUCTION TO ECOLOGY** 2 credits  
Basic principles governing structure and function of natural ecosystems. Various options for managing natural resources, human populations, biotic communities and industrial technologies at global level emphasized. Not available for credit toward a degree in biology.
- 108 INTRODUCTION TO BIOLOGICAL AGING** 3 credits  
Prerequisite: 3100:103. Survey of normal anatomical and physical changes in aging and associated diseases. (For students in gerontological programs at Wayne College. Not for B.S. biology credit.)
- 111 PRINCIPLES OF BIOLOGY I** 4 credits  
Molecular, cellular basis of life; energy transformations, metabolism; cell reproduction, genetics, development, immunology, evolution, and origin and diversity of life (through plants). Laboratory.
- 112 PRINCIPLES OF BIOLOGY II** 4 credits  
Prerequisite: 111. Animal diversity; nutrients, gas exchange, transport, homeostasis, control in plants and animals; behavior, ecology. (111-112 are an integrated course for biology majors.) Laboratory.
- 130 PRINCIPLES OF MICROBIOLOGY** 3 credits  
Basic principles and terminology of microbiology; cultivation and control of microorganisms; relationships of microorganisms to humans and their environment; medical microbiology. Laboratory.
- 190/191 HEALTH-CARE DELIVERY SYSTEMS** 1 credit each  
Health-care principles and practices. Restricted to the student in NEOUCOM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences. Field trips involved; minor transportation costs.
- 208.9 HUMAN ANATOMY AND PHYSIOLOGY** 4 credits each  
Sequential. Prerequisite: one year of college chemistry. Study of structure and function of the human body. Laboratory.
- 211 GENERAL GENETICS** 3 credits  
Prerequisite: 112. Principles of heredity, principles of genetics.
- 212 GENETICS LABORATORY** 1 credit  
Prerequisite or corequisite: 211. Laboratory experiments in genetics with emphasis on scientific method; techniques in molecular biology.
- 217 GENERAL ECOLOGY** 3 credits  
Prerequisite: 112. Study of interrelationships between organisms and environment.
- 264 ANATOMY AND PHYSIOLOGY OF SPEECH AND HEARING** 3 credits  
Prerequisite: 265. Study of anatomy and physiology of organs directly and indirectly responsible for sound perception and production of speech. Laboratory. Field trips involved; minor transportation costs.
- 265 INTRODUCTORY HUMAN PHYSIOLOGY** 4 credits  
Study of physiological processes in human body, particularly at organ-systems level. Not open to preprofessional majors. Laboratory.
- 290/291 HEALTH-CARE DELIVERY SYSTEMS** 1 credit each  
Health-care principles and practices. A continuation of 190,1 for a second year student in NEOUCOM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences. Field trips involved; minor transportation costs.
- 311 CELL BIOLOGY** 3 credits  
Prerequisites: 112 and 3150:202 (organic and biochemistry). Study of structure and function of cells using microbial and animal cells for demonstration of common tenets.
- 315 EVOLUTIONARY BIOLOGY DISCUSSION** 1 credit  
Prerequisite: 211. Informal discussions of various aspects of organic evolution of general or special interest.
- 316 EVOLUTIONARY BIOLOGY** 3 credits  
Prerequisite: 211. History of evolutionary thought; Darwinian and post-Darwinian concepts, mechanisms of evolution; molecular evolution; evolutionary history of plants and animals.
- 331 MICROBIOLOGY** 4 credits  
Prerequisites: 112, 211 and prerequisite or corequisite 3150:263. Survey of protists with emphasis on the bacteria: their morphology, cultivation and chemical characteristics. Relationships of microorganisms to humans and their environment. Laboratory.
- 342 FLORA AND TAXONOMY** 3 credits  
Prerequisite: 112. Origins of Ohio flora, ecological and evolutionary relationships. Survey of local flowering plant families, collection and identification of flora. Laboratory and field trips.
- 365 HISTOLOGY I** 3 credits  
Prerequisite: 311. Cellular structure of organs in relation to their functional activity, life history, comparative development. Laboratory.
- 366 HISTOLOGY II** 3 credits  
Prerequisite: 365. Microscopic study of animal tissue preparations and histochemical stains; emphasis on functional differences. Laboratory.
- 381 HUMAN GENETICS** 2 credits  
Prerequisite: 112. Principles of genetics in the human, immunogenetics, mutation, genetics of population, selection and eugenics. Not open to biology majors.
- 383 LABORATORY TECHNIQUES AND INSTRUMENTATION IN BIOLOGY** 2 credits  
Prerequisites: 112 and 3150:151,152,153. Instruction in techniques and instrumentation used in biological laboratories.
- 384 TECHNIQUES AND INSTRUMENTATION LABORATORY IN BIOLOGY** 1 credit  
Prerequisite or corequisite: 383. Application of biological techniques and instrumentation with emphasis on isolation and identification of cellular components and metabolites; also includes enzymology, use of radioisotopes and light and electron microscopy.
- 392 BIOLOGY OF AGING** 3 credits  
Prerequisite: 112 or 265 or equivalent. Introduction to anatomical and physiological changes occurring in organ systems of humans during aging process; cellular basis for these changes; biological theories of aging.
- 400/500 FOOD PLANTS** 2 credits  
Prerequisite: 311 or permission of instructor. A survey of the plants used for human food, including their history, structure, uses.
- 421/521 TROPICAL FIELD BIOLOGY** 4 credits  
Prerequisites: 111/112 or equivalent. Ecology of coral reefs, tide pools, mangroves, intertidal zones, terrestrial flora and fauna, island biogeography. Taught at a field station in the tropics. Field trips involved; minor transportation costs.
- 422/522 CONSERVATION OF BIOLOGICAL RESOURCES** 4 credits  
Prerequisite: 217 or permission. Basic principles for management of plant and animal resources and natural areas. Political, economic and social aspects of resource management. Laboratory. Field trips involved; minor transportation costs.
- 424/524 FRESHWATER ECOLOGY** 3 credits  
Prerequisite: 217. Field, laboratory study of lake ecosystems. Species composition of selected biotic communities, community energetics, nutrient cycling. Limnological survey of a local lake. Laboratory. Field trips involved; minor transportation costs.
- 425/525 FRESHWATER ECOLOGY FIELD AND LABORATORY STUDIES** 3 credits  
Prerequisite: 217 or permission of instructor. Field and laboratory studies of local lakes, ponds, and reservoirs. Collection, identification, and ecology of aquatic plants and animals, especially phytoplankton, zooplankton and benthic organisms.
- 426/526 APPLIED AQUATIC ECOLOGY** 4 credits  
Prerequisite: permission. Biological methods for assessing quality of natural waterways. Emphasis given to use of benthic invertebrates as indices of water quality. Laboratory. Field trips involved; minor transportation costs.
- 428/528 BIOLOGY OF BEHAVIOR** 2 credits  
Prerequisites: 211, 217 and 316. Biological basis of behavior: ethological theory; function, causation, evolution and adaptiveness of behavior. May be taken without 429/529.
- 429/529 BIOLOGY OF BEHAVIOR LABORATORY** 2 credits  
Prerequisites or corequisites: 428/528 and permission of instructor. Individualized, directed study to provide the student with firsthand experience in observing, describing and interpreting animal behavior.
- 431/531 GENERAL MICROBIAL PHYSIOLOGY** 2 credits  
Prerequisites: 331 or permission. Physiology of microscopic eucaryotes, archaeobacteria, and eubacteria.
- 432/532 ADVANCED GENERAL BACTERIOLOGY** 4 credits  
Prerequisite: 331. Study of the groups of bacteria involved in the production of food or chemicals, those found in soil and water and those involved in microbial biogeochemical cycles. Laboratory.
- 433/533 PATHOGENIC BACTERIOLOGY** 4 credits  
Prerequisite: 331. Study of major groups of bacteria which produce infections in humans. Biochemical properties of microorganisms which engender virulence and nature of host resistance. Laboratory.
- 435/535 VIROLOGY** 4 credits  
Prerequisite: 331. Physical, chemical and biological properties of viruses including mechanisms of infection, genetics and tumor formation; methods of cultivation and identification. Laboratory.
- 437/537 IMMUNOLOGY** 4 credits  
Prerequisite: 211 and 331; recommended: 433. Nature of antigens, antibody response and antigen-antibody reactions. Site and mechanism of antibody formations, hypersensitivity, immunologic tolerance and immune diseases considered. Laboratory.
- 440/540 MYCOLOGY** 4 credits  
Prerequisite: 112. Structure, life history, classification of representative fungi with emphasis on the importance of fungi to humans. Laboratory.
- 441/541 PLANT DEVELOPMENT** 4 credits  
Prerequisites: 112 and one year of organic chemistry. Embryology and morphogenesis of plants in relation to physical, chemical, genetic and spatial factors. Laboratory.
- 442/542 PLANT ANATOMY** 3 credits  
Prerequisite: 112. Structure and development of cells, tissues, organs and organ systems of seed plants. Laboratory.
- 443/543 PHYCOLOGY** 4 credits  
Prerequisite: 112. Examination of the major groups of algae with emphasis on life histories and their relationship to algal form and structure. Laboratory.

- 445/545 PLANT MORPHOLOGY** 4 credits  
Prerequisite: 112. Structure, reproduction, life cycles, ecology, evolution, economic significance of land plants-bryophytes, club-mosses, whisk ferns, horsetails, ferns, seed plants. Laboratory. Field trips involved; minor transportation costs.
- 447/547 PLANT PHYSIOLOGY** 3 credits  
Prerequisites: 112 and one year of organic chemistry. Water, soil and mineral requirements of plants, and their metabolism, growth and response to internal and external stimuli. Laboratory.
- 448/548 ECONOMIC BOTANY** 2 credits  
Prerequisites: 111/112 or instructor's permission. A survey of economically important plants and plant products, excluding food plants. Includes wood and fiber, dyes, drugs, resins, latex and other extractives.
- 450/550 ANIMAL PESTS AND VECTORS** 3 credits  
Prerequisite: 217 or permission of instructor. Study of the biology and control of disease vectors and urban pests. Laboratory.
- 451/551 GENERAL ENTOMOLOGY** 4 credits  
Prerequisites: 112, 217. Structure, physiology, life cycles, economic importance and characteristics of orders and major families of insects. Laboratories parallel lectures.
- 453/553 INVERTEBRATE ZOOLOGY** 4 credits  
Prerequisites: 112, 217. Invertebrate groups, their classification, functional morphology, adaptive radiation and life history. A phylogenetic approach is used. Laboratories parallel lectures.
- 454/554 PARASITOLOGY** 4 credits  
Prerequisites: 112, 3150:201. Principles of parasitism; host parasite interactions; important human and veterinary parasitic diseases; and control measures. Laboratories parallel lectures.
- 456/556 ORNITHOLOGY\*** 4 credits  
Prerequisite: 112. Introduction to biology of birds: classification, anatomy, physiology, behavior, ecology, evolution, natural history and field identification. Laboratory and field trips.
- 458/558 VERTEBRATE ZOOLOGY** 4 credits  
Prerequisite: 316 or permission. Biology of vertebrates, except birds evolution, ecology, behavior, systematics and anatomy. Laboratory with field trips.
- 461,2/561,2 HUMAN PHYSIOLOGY** 4 credits each  
Prerequisite: senior or graduate standing. Detailed study of function of the human body with special emphasis on neuromuscular, cardiovascular, respiratory, renal and endocrine physiology. Laboratory.
- 464/564 GENERAL AND COMPARATIVE PHYSIOLOGY** 4 credits  
Prerequisites: 112 and one year of organic chemistry. Study of cellular, osmoregulatory, respiratory, cardiovascular, endocrine and neural mechanisms involved in understanding physiology of variety of invertebrate and vertebrate animals. Laboratory.
- 465/565 ADVANCED CARDIOVASCULAR PHYSIOLOGY** 3 credits  
Prerequisite: 462 or 562 or permission. Study of biological mechanisms involved in heart attack, strokes, fluid balance, hypertension and heart disease. Controversial issues in each area will be examined and current research presented.
- 466/566 VERTEBRATE EMBRYOLOGY** 4 credits  
Prerequisite: 112. Designed to introduce the process of vertebrate development. Lecture focuses on human development. Lecture and laboratory work include descriptive and experimental embryology.
- 467/567 COMPARATIVE VERTEBRATE MORPHOLOGY** 4 credits  
Prerequisite: 112. An introduction to the comparative morphology of major vertebrates. The laboratories consist of dissections of representative vertebrates.
- 468/568 THE PHYSIOLOGY OF REPRODUCTION** 3 credits  
Prerequisite: 462/562 or permission. Study of the physiological mechanisms of reproduction throughout the animal kingdom with special emphasis upon mammalian endocrinological control. Controversial issues in the field will be examined and current research presented.
- 469/569 RESPIRATORY PHYSIOLOGY** 3 credits  
Prerequisites: 462/562 or 464/564 or permission. Study of mechanisms determining gas exchange including mechanics, ventilation, blood flow, diffusion, and control systems. Emphasis is given to normal human lung function. (Clinical aspects are not considered in detail.)
- 480/580 RADIATION BIOLOGY\*** 3 credits  
Prerequisite: permission. Principles of radioactivity, interaction with matter, particularly its effects on biological systems. Detection devices, radiation safety and dosimetry, use of radiolabel ed compounds in laboratory. Laboratory and field trips.
- 481/581 ADVANCED GENETICS** 3 credits  
Prerequisite: 211. Nature of the gene; genetic codes; hereditary determinants; mutagenesis and genes in population. Lecture and seminar.
- 484/584 PHARMACOLOGY** 3 credits  
Prerequisite: 311; recommended: college-level physiology. Interactions of drugs and living systems with emphasis on molecular and cellular mechanisms of action, drug metabolism and excretion, and selected aspects of environmental toxicology. Clinical aspects and specific drug therapies not considered in detail.
- 494/594 WORKSHOP IN BIOLOGY** 1-3 credits  
(May be repeated) Prerequisite: permission of instructor. Group studies of special topics in biology. May not be used to meet undergraduate or graduate major requirements in biology. May be used for elective credit only.
- 495 SPECIAL TOPICS: BIOLOGY** 1-3 credits  
(May be repeated) Prerequisite: permission. Special courses offered once or only occasionally in areas where no formal course exists. A maximum of six credits may be applied to requirements for a major.
- 497,8/597,8 BIOLOGICAL PROBLEMS** 1-2 credits each  
Prerequisite: permission. Honors-level work, usually consisting of laboratory investigations.
- 499 SENIOR HONORS PROGRAM IN BIOLOGY** 1-3 credits  
(May be repeated for a total of five credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Open only to biology and natural sciences divisional majors in Honors Program. Independent study leading to completion of approved senior honors.

## MEDICAL TECHNOLOGY

### 3120:

- 401 SPECIAL TOPICS LABORATORY: MANAGEMENT, EDUCATION AND SAFETY** 1-4 credits  
Seminars, lectures, workshops in medical technology not included in formal clinical courses. Minimum one credit required for graduation.
- 410 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS I** 1 credit  
Physiology of renal system; theory of renal functions in health and disease states. Theory of other fluid systems in diagnosis of disease.
- 411 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS II PRACTICUM** 1 credit  
Renal function tests to include chemical and microscopic examination of urine. Methods of detection of chemical and cellular elements of other body fluids.
- 420 CLINICAL CHEMISTRY AND BIOCHEMISTRY I** 4 credits  
Concepts of clinical biochemistry; identification and quantification of specific chemical substances in body fluids in normal and disease states; principles of instrumentation and quality control.
- 421 CLINICAL CHEMISTRY AND BIOCHEMISTRY II PRACTICUM** 4 credits  
Clinical application by various analytical techniques; clinical correlation of results with disease states.
- 430 CLINICAL HEMATOLOGY I** 2 credits  
Theory of blood cell formation; identification of blood and bone marrow cells; differentiation of erythrocytes, leukocytes, morphology.
- 431 CLINICAL HEMATOLOGY II PRACTICUM** 2 credits  
Clinical application and practice of blood cell mounting procedures using automated and manual techniques.
- 432 CLINICAL COAGULATION** 1 credit  
Theory of coagulation mechanisms and their relationship to disease states. Emphasis on identification of coagulation deficiencies and abnormalities.
- 440 CLINICAL IMMUNOHEMATOLOGY I** 2 credits  
Theory of principles of immunology applied to blood grouping, cross matching; blood components; transfusion; blood collection, processing and preservation.
- 441 CLINICAL IMMUNOHEMATOLOGY II PRACTICUM** 2 credits  
Clinical application of theory; cross matching; blood donors; blood bank management.
- 450 CLINICAL IMMUNOLOGY I** 1 credit  
Antigens and antibodies and their interaction in disease states.
- 451 CLINICAL IMMUNOLOGY II PRACTICUM** 1 credit  
Qualitative and quantitative serological laboratory procedures in immunology.
- 460 CLINICAL MICROBIOLOGY I** 4 credits  
Theory of diagnosis of medical microbiology with emphasis on pathogenic bacteria and their relationship to disease.
- 461 CLINICAL MICROBIOLOGY II PRACTICUM** 4 credits  
Isolation and identification of pathogenic bacteria, media making, sensitivity and antimicrobial agents, principles of sterilization and asepsis.
- 462 CLINICAL MYCOLOGY** 1 credit  
Study of pathogenic fungi, basic methods of cultivation and identification, treatment and safety precautions.
- 463 CLINICAL PARASITOLOGY** 1 credit  
Study of parasites common to humans, life cycles, and relationship to humans, procedure for handling and examining, identification by morphological characteristics.

## CYTOTECHNOLOGY

### 3130:

- 401 INTRODUCTION TO CYTOLOGY** 1 credit  
A brief course in which by means of lecture and demonstration the student becomes familiar with the cytotechnologist's role and with cytology laboratory. Areas covered include historical background of clinical cytology, microscopy and basic histology.
- 410 CYTOPREPARATION** 2 credits  
Combined lecture and laboratory of different cytologic techniques, stain preparation, staining procedures, mounting and cover slipping of specimens. Also included are pertinent laboratory measurements, record keeping and safety measures for cytopreparation laboratory.
- 411 GYNECOLOGIC CYTOPATHOLOGY** 5 credits  
Anatomy, histology and cellular morphology of female reproductive system. Study of disease, processes and endocrinopathies, inflammation and benign lesions. Stressed are premalignant lesions of cervix and endometrium, as well as malignant neoplasms and their cytologic characteristics. A study of extruterine and metastatic tumors is included.
- 412 GENITO-URINARY CYTOPATHOLOGY** 3 credits  
Study of anatomy, histology, pertinent physiology and cellular morphology of kidneys, ureters, bladder and lower urinary tract. Emphasis on recognition of cancer cells and various benign pathologic conditions in the urinary tract by microscopic studies of urine sediment.
- 413 RESPIRATORY CYTOPATHOLOGY** 3 credits  
Study of disease processes as related to cytology of respiratory tract. Covers general anatomy, normal histology and cytology, inflammatory and mycotic diseases, benign proliferative disorders and malignant neoplasms with emphasis on their associated cell morphology.

- 414 BODY FLUIDS CYTOPATHOLOGY** 4 credits  
Anatomy, histology and clinical aspects of benign and malignant diseases involving body cavities, central nervous system and synovial cavities are presented. Emphasis is placed in cellular morphology of primary and metastatic tumors and in different cytodiagnosis.
- 415 CYTOPATHOLOGY OF THE ALIMENTARY TRACT** 3 credits  
Anatomy, histology and pertinent physiology of the oral cavity, esophagus, stomach, small and large intestines, rectum and anal canal. The biologic behavior, clinical presentation and cellular morphology of various benign epithelial lesions and malignant tumors emphasized.
- 416 BREAST SECRETION AND NEEDLE ASPIRATION SMEARS** 2 credits  
The study of anatomy and histology of body organs subject to needle aspiration biopsy with emphasis on cellular morphology of both benign and malignant tumors.
- 417 CYTOGENETICS** 1 credit  
Basic genetic principles are taught to lay foundation for study of chromosomal aberrations and their pathological manifestations. Include techniques of sex chromatin determination, culturing and harvesting of blood cells, preparation of metaphase plate and preparation of karyotypes.
- 418 CYTOLOGY SEMINARS AND RESEARCH** 3 credits  
Collections of American Society of Cytology Seminars are presented. Current cytology cases from within department are also utilized. Based on projected slides and pertinent clinical history, a student formulates opinions on each case. Each case presented is discussed in depth by student with faculty moderator. A term paper on an independently selected topic in cytology is to be submitted and presented to the class and faculty.
- 420 CYTOLOGY PRACTICUM** 5 credits  
Involves five hours of daily prescreening of routine gynecologic and nongynecologic specimens. Abnormal cases are reviewed with a proctor who is a registered cytotechnologist or pathologist. Correlation of clinical data, follow up of patients and proper reporting is emphasized. The goal is to be able to screen accurately at least 40 cases of gynecologic specimens per day.

## CHEMISTRY

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### 3150:

- 100 CHEMISTRY AND SOCIETY** 3 credits  
Qualitative introduction to chemistry using current world problems and commercial products, such as the ozone layer, nuclear fission, polymers and drugs, to introduce chemical principles.
- 129,130 INTRODUCTION TO GENERAL ORGANIC AND BIOCHEMISTRY I, II** 4 credits each  
Sequential. Introduction to principles of chemistry and fundamentals of inorganic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, body fluids and radiation effects.
- 151 PRINCIPLES OF CHEMISTRY I** 3 credits  
Introduction to basic facts and principles of chemistry including atomic and molecular structure, states of matter and thermodynamics. For chemistry majors, pre-medical students and most other science majors. Discussion (day sections).
- 152 PRINCIPLES OF CHEMISTRY LABORATORY** 1 credit  
Pre/Corequisite: 151, 152. Laboratory course applying principles of thermodynamics, chemical analysis and laboratory practice.
- 153 PRINCIPLES OF CHEMISTRY II** 3 credits  
Prerequisite: 151, 152. Continuation of 151, 152, including aqueous solution theory, chemical kinetics, equilibrium, electrochemistry and nuclear chemistry. For chemistry majors, premedical students and most other science majors. Discussion (day sections).
- 154 QUALITATIVE ANALYSIS** 2 credits  
Corequisite: 153. Laboratory course applying principles of chemical equilibrium to inorganic qualitative analysis.
- 201,2 ORGANIC CHEMISTRY AND BIOCHEMISTRY I, II** 4 credits each  
Sequential. Prerequisite: 122. Designed especially for students in medical technology. Principles of organic chemistry with emphasis on biological systems. Laboratory.
- 203 NUTRITIONAL BIOCHEMISTRY** 3 credits  
Prerequisite: 122 or 130. Catabolic processes for energy production and nutritional requirements in liver, heart and skeletal muscle and adipose tissue. Biochemistry of diabetes, heart disease, obesity and atherosclerosis. May not be used to meet undergraduate major requirements in chemistry.
- 263,4 ORGANIC CHEMISTRY LECTURE I, II** 3 credits each  
Sequential. Prerequisite: 154 or permission. Structure and reactions of organic compounds, mechanism of reactions.
- 265,6 ORGANIC CHEMISTRY LABORATORY I, II** 2 credits each  
Sequential. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.
- 313,4 PHYSICAL CHEMISTRY LECTURE I, II** 3 credits each  
Sequential. Prerequisites: 264, 3450,235, 3650,292 or permission of instructor. Gases, thermodynamics, thermochemistry, solutions, dilute solutions, chemical equilibrium, phase rule, chemical kinetics, electrochemistry, electrolytic equilibria, atomic and molecular structure.
- 380 ADVANCED CHEMISTRY LABORATORY I** 2 credits  
Corequisite: 313 and 423 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.
- 381 ADVANCED CHEMISTRY LABORATORY II** 2 credits  
Prerequisite 380; corequisite: 314 and 424 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

- 401/501 BIOCHEMISTRY LECTURE I** 3 credits  
Prerequisite: 264. Biochemistry of amino acids, carbohydrates, lipids, and nucleic acids: structure/function relations. Enzymes as catalysts: kinetics and regulation. Cofactors.
- 402/502 BIOCHEMISTRY LECTURE II** 3 credits  
Prerequisite: 401/501. Overview of metabolism; thermodynamics; carbohydrate, fatty acid, amino acid, and nucleoside anabolism and catabolism; hormonal control of metabolism. Photosynthesis.
- 423 ANALYTICAL CHEMISTRY I** 3 credits  
Prerequisite: 264 or permission. Theoretical principles of quantitative and instrumental analysis.
- 424 ANALYTICAL CHEMISTRY II** 3 credits  
Prerequisite 313 and 423 or permission. Instrumental analysis with emphasis on newer analytical tools and methods.
- 463 ADVANCED ORGANIC CHEMISTRY** 3 credits  
Prerequisites: 264, 304 or 314 or permission. Introduction to study of mechanisms of organic reactions.
- 472/572 ADVANCED INORGANIC CHEMISTRY** 3 credits  
Prerequisite: 304 or 314. Concepts of atomic structure integrated in systematic classification of elements. Periodic table. Chemistry of the representative elements. Transition elements including coordination compounds, organometallics and metal carbonyls.
- 480 ADVANCED CHEMISTRY LABORATORY III** 2 credits  
Prerequisite 381; corequisite 472 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.
- 481 ADVANCED CHEMISTRY LABORATORY IV** 2 credits  
Prerequisite 480 and 472 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.
- 490/590 WORKSHOP IN CHEMISTRY** 1-3 credits  
(May be repeated) Group studies of special topics in chemistry. May not be used to meet undergraduate or graduate major requirements in chemistry.
- 497 HONORS PROJECT IN CHEMISTRY** 2 credits  
(May be repeated for a total of eight credits) Prerequisites: junior or senior standing in Honors Program and permission of department honors preceptor. Independent research leading to completion of honors thesis under guidance of honors project adviser.
- 498 SPECIAL TOPICS: CHEMISTRY** 1-3 credits
- 499 RESEARCH PROBLEMS** 1-2 credits  
(May be repeated for a total of eight credits) Prerequisite: permission. Assignment of special problems to student, designed as an introduction to research problems.

## CLASSICS

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### 3200:

- 189 MYTHOLOGY OF ANCIENT GREECE** 3 credits  
Prerequisite: 3400:210. Myth, legend and folktale in ancient Greece, with some attention to religion (Olympian deities, Orphism, etc.) and the transmission of Greek myth to Rome and the West. No foreign language necessary.
- 190 THE MAKING OF ENGLISH WORDS FROM LATIN AND GREEK ELEMENTS** 3 credits  
The influence of Latin and Greek on English vocabulary with some attention to the use of these languages in the scientific and legal fields. No foreign language is necessary.
- 220 INTRODUCTION TO THE ANCIENT WORLD** 3 credits  
Prerequisite: 3400:210. Introduction to the civilizations of the Near East, Greece, and Rome, their cultural influences upon each other and their legacy to Europe.
- 313 ARCHAEOLOGY OF GREECE** 3 credits  
The ruins and monuments of Greece; history reconstructed by examination of the material remains. No foreign language necessary. Required of majors.
- 314 ARCHAEOLOGY OF ROME** 3 credits  
The ruins and monuments of Rome; history reconstructed by examination of the material remains. No foreign language necessary. Required of majors.
- 381 THE LITERATURE OF GREECE** 3 credits  
Prerequisite: 3400:210. Major writers of ancient Greece and their influence on later European literature. No foreign language necessary. Required of majors.
- 382 THE LITERATURE OF ROME** 3 credits  
Major writers of ancient Rome and their influence on later European literature. No foreign language necessary. Required of majors.
- 401,2/501,2 EGYPTOLOGY I AND II** 3 credits each  
The history and antiquities of ancient Egypt.
- 404,5/504,5 ASSYRIOLOGY** 3 credits each  
(May be repeated for credit with another cuneiform language) Prerequisite: permission of instructor. The Akkadian language.
- 407,8/507,8 ANCIENT NEAR EASTERN ARCHAEOLOGY** 3 credits each  
(May be repeated for credit with change of subject) Prerequisite: permission of instructor. Palestine, Mesopotamia, Asia Minor, adjacent lands; Old Testament in light of material evidence.

**450/550 SELECTED TOPICS IN ANCIENT CULTURES** 3 credits  
(May be repeated with change of subject) Varied offerings in literature, art and archaeology and religion. No foreign language necessary.

**490/590 WORKSHOP IN CLASSICS** 1-3 credits  
(May be repeated with change in topic). Group studies of special topics in Classics. Cannot be used to fulfill undergraduate major requirements in Classics; for elective credit only.

**497,8/597,8 READING AND RESEARCH IN THE ANCIENT NEAR EAST** 1-3 credits  
Prerequisite: permission of instructor. Advanced work in various aspects of Ancient Near Eastern Studies (Archaeology, Assyriology, Egyptology, etc.).

**499 HONORS PROJECT IN CLASSICS** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Independent study leading to completion of a senior honors thesis under the supervision of a member of the Department of Classics.

## GREEK

### 3210:

**121,2 BEGINNING GREEK I AND II** 4 credits each  
Sequential. Standard Attic Greek of classical times.

**223,4 INTERMEDIATE GREEK** 3 credits each  
Prerequisites: 121, 122. A survey of readings of the less difficult authors such as Homer, certain dialogues of Plato, Herodotus, Xenophon, New Testament or the like.

**303,4 ADVANCED GREEK** 3 credits each  
(May be repeated with a change of subject) Tragedy, comedy, philosophy, history, lyric poetry, prose composition or epigraphy.

**497,8/597,8 GREEK READING AND RESEARCH** 3 credits each  
(May be repeated for credit with change of subject) Prerequisite: permission of instructor. Homer, Sophocles, Plato or the like.

## LATIN

### 3220:

**121,2 BEGINNING LATIN I AND II** 4 credits each  
Sequential. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building.

**223,4 INTERMEDIATE LATIN** 3 credits each  
Prerequisites: 121, 122. A survey of readings of the less difficult authors such as Pliny, Caesar, Plautus, Cicero's Letters or equivalent material.

**303,4 ADVANCED LATIN** 3 credits each  
(May be repeated for credit with change of subject) Prerequisites: 223, 224 or equivalent. Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers.

**497,8/597,8 LATIN READING AND RESEARCH** 3 credits each  
(May be repeated for credit with change of subject) Prerequisite: permission of instructor. Generally Latin epigraphy, prose composition or philology; numismatics or certain other archaeological topics may be offered.

## ECONOMICS

### 3250:

**100 INTRODUCTION TO ECONOMICS** 3 credits  
May not be substituted for 200, 201, 244. Economics primarily concerned in a broad social science context. Adequate amount of basic theory introduced. Cannot be used to satisfy major or minor requirements in economics.

**200 PRINCIPLES OF MICROECONOMICS** 3 credits  
Analysis of behavior of the firm and household, and their impact on resource allocation, output and market price. No credit if 244 already taken.

**201 PRINCIPLES OF MACROECONOMICS** 3 credits  
Prerequisite: 200. Study of the economic factors which affect the price level, national income, employment, economic growth. No credit if 244 already taken.

**244 INTRODUCTION TO ECONOMIC ANALYSIS** 3 credits  
Recommended for engineering and mathematical science majors. Intensive introduction to analysis of modern industrial society and formulation of economic policy. Structure of economic theory and its relation to economic reality. No credit to a student who has completed 200, 201.

**248 CONSUMER ECONOMICS** 3 credits  
Spending habits of American consumers; influences affecting their spending decisions, personal finance, budget planning, saving programs, installment buying, insurance, investments, housing finance.

**330 LABOR PROBLEMS** 3 credits  
Prerequisites: 200, 201, or 244. Labor economics, principles and public policy. Study of structure of labor market and impact unions have on labor management relations.

**333 LABOR ECONOMICS** 3 credits  
Prerequisite: 200 or 244. Theoretical tools used in analysis of problems of labor in any modern economic system. Emphasis given to examination of determinants of demand for and supply of labor.

**360 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY** 3 credits  
Prerequisites: 200 or 244. Role of industrial structure and firm conduct in performance of industry and way in which antitrust policy is designed to provide remedies where performance is unsatisfactory.

**380 MONEY AND BANKING** 3 credits  
Prerequisite: 201. Institutions of money, banking and credit, monetary expansion and contraction, public policies affecting this process, development of our money and banking system.

**385 ECONOMICS OF NATURAL RESOURCES AND THE ENVIRONMENT** 3 credits  
Prerequisites: 100 or 200 or 244 or permission. Introduction to economic analysis of use of natural resources and economics of environment. Problems of water and air pollution, natural environments, natural resource scarcity, conservation, economic growth.

**389 ECONOMICS OF ENERGY** 3 credits  
Prerequisites: 200, 201 or permission of the instructor. Frame of economic theory is applied to analyze the energy sector. Theoretical issues relating energy with inflation, economic growth and public policy will also be examined.

**400 INTERMEDIATE MACROECONOMICS** 3 credits  
Prerequisites: 201 and 3450:145 or equivalent. Changes in national income, production, employment, price levels, long-range economic growth, short-term fluctuations of economic activity.

**405 ECONOMICS OF THE PUBLIC SECTOR** 3 credits  
Prerequisites: 200 and 201, or 244. Considers nature and scope of government activity, rationale for government intervention, problems of public choice, taxation and revenue-raising, cost-benefit analysis, program development and evaluation.

**406/506 STATE AND LOCAL PUBLIC FINANCE** 3 credits  
Prerequisite: 410; recommended: 405. Examines economic rationale and problems for provision of goods and services by different governmental units. Considers alternative revenue sources and special topics.

**410 INTERMEDIATE MICROECONOMICS** 3 credits  
Prerequisites: 200 or 244, and 3450:145 or equivalent. Advanced analysis of consumer demand, production costs, market structures, determinants of factor income.

**420 MATHEMATICAL ECONOMICS I** 3 credits  
Prerequisites: 200 or 244 and 3450:215 or permission of instructor. Mathematical treatment of economic theory in framework of comparative statics. Emphasis on theory of the firm, theory of consumer behavior, general equilibrium analysis and welfare analysis.

**421 MATHEMATICAL ECONOMICS II** 3 credits  
Prerequisite: 420 or permission of instructor. Use of calculus and linear algebra to dynamic economic analysis; solution techniques; some significant dynamic models from literature.

**426 ECONOMETRIC METHODS AND APPLICATIONS** 3 credits  
Prerequisites: 3470:460 or 3470:461 or the equivalent or permission of the instructor. The study and use of regression and analysis of variance in analyzing economic data. Students will learn to specify and test economic hypotheses and make economic projections. Use of the computer will be extensive.

**427/527 ECONOMIC FORECASTING** 3 credits  
Prerequisite: 3470:460,461 or permission of instructor. Study of methods for building, identifying, fitting and checking dynamic economic models and the use of these models for forecasting. Emphasis is on the application of available computer software systems.

**430/530 LABOR MARKET POLICY** 3 credits  
Prerequisites: 330 or 333. Intensive study of current labor market policy issues (e.g., discrimination, poverty, the changing industrial structure, and the economics of education).

**431 LABOR AND THE GOVERNMENT** 3 credits  
Prerequisite: 330. Development of public policy for control of industrial relations, from judicial control of 19th Century to statutory and administrative controls of World War II and postwar periods.

- 432 THE ECONOMICS AND PRACTICE OF COLLECTIVE BARGAINING** 3 credits  
Prerequisite: 200 or 244. Principles and organization of collective bargaining, collective bargaining agreements, issues presented in labor disputes and settlements, union status and security, wage scales, technological change, production standards, etc.
- 436/535 THE DEVELOPMENT OF AMERICAN CORPORATE STRUCTURE** 3 credits  
Traces evolution of American corporate structure from late 19th Century to present. Explains and analyzes changing dimensions of corporate structure and response of government. Case studies analyzed.
- 440/540 SPECIAL TOPICS: ECONOMICS** 3 credits  
Prerequisite: permission. Opportunity to study special topics and current issues in economics.
- 450/550 COMPARATIVE ECONOMIC SYSTEMS** 3 credits  
Prerequisites: 200 and 201 or 244 or permission of instructor. Systems of economic organization, ranging from the theoretical extreme of a perfectly free market economy to the socialist varieties. Historical evolution of economic systems covering problems in theory and practice.
- 460/560 ECONOMIC DEVELOPMENT AND PLANNING FOR UNDERDEVELOPED COUNTRIES** 3 credits  
Prerequisites: 200 and 201, or 244. Basic problems in economic development. Theories of development. Government planning for development. Trade and development of underdeveloped countries. Credit not available for students with credit for 3250:664.
- 461 PRINCIPLES OF INTERNATIONAL ECONOMICS** 3 credits  
Prerequisites: 200 and 201, or 244. International trade and foreign exchange, policies of free and controlled trade, international monetary problems.
- 475/575 DEVELOPMENT OF ECONOMIC THOUGHT** 3 credits  
Prerequisites: 200 and 201, or 244. Evolution of theory and method, relation of ideas of economists contemporary to conditions.
- 461/581 MONETARY AND BANKING POLICY** 3 credits  
Prerequisites: 380, 400. Control over currency and credit, policies of control by central banks and governments, United States Treasury and Federal Reserve System.
- 467 URBAN ECONOMICS: THEORY AND POLICY** 3 credits  
Prerequisite: 410. Theoretical and empirical analyses of allocation, growth and structure in urban economy. Urban problems. Special attention given to resource allocation in urban public sector.
- 460 INDEPENDENT STUDY IN ECONOMICS** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Independent study in economics under supervision and evaluation of selected faculty member.
- 461/591 WORKSHOP IN ECONOMICS** 1-3 credits  
(May be repeated) Group studies of special topics in economics. May not be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.
- 467 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual senior honors thesis on a creative project relevant to economics, approved and supervised by faculty member of the department.

## ENGLISH

### 3300:

- 111 ENGLISH COMPOSITION I** 4 credits  
Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing.
- 112 ENGLISH COMPOSITION II** 3 credits  
Prerequisite: 3300:111. Designed to develop skills in analyzing and writing persuasive arguments.
- 260 CLASSIC AND CONTEMPORARY LITERATURE** 3 credits  
Prerequisites: 3300:111 and 112 or their equivalents, and 3400:210, or permission of the instructor. Close reading and analysis of fiction, poetry, and drama from the evolving canon of American, British, and World literature. *This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.*
- 262 SHAKESPEARE AND HIS WORLD** 3 credits  
Prerequisites: 3300:111 and 112 or their equivalents, and 3400:210, or permission of the instructor. An introduction to the works of Shakespeare and their intellectual and social contexts. Each section "places" Shakespeare through compact readings of works by the playwright's contemporaries. *This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.*
- 276 SPECIALIZED WRITING** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated for different topics, with permission) Principles and practice of style, structure and purpose in writing, with special applications to writing demands of a specific career area.
- 277 INTRODUCTION TO POETRY WRITING** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Practice in writing poems. Study of techniques in poetry, using contemporary poems as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.
- 278 INTRODUCTION TO FICTION WRITING** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Practice in writing short stories. Study of various techniques in fiction, using contemporary stories as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.
- 279 INTRODUCTION TO SCRIPT WRITING** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Practice in writing scripts. Study of various techniques in script writing, using contemporary models for study. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.
- 280 POETRY APPRECIATION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Close reading of a wide selection of British and American poems with emphasis on dramatic situation, description, tone, analogical language, theme and meaning.
- 281 FICTION APPRECIATION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Close reading of modern masters of short story and novel.
- 282 DRAMA APPRECIATION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated for credit as a text or a film appreciation course) Close reading and analysis of a variety of plays.
- 283 FILM APPRECIATION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Introduction to dramatic choices made by filmmakers in scripting, directing, editing and photographing narrative films; and qualities of reliable film reviews.
- 301 ENGLISH LITERATURE I** 4 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Studies in English literature from Old English to 1800, with emphasis upon specific representative works and upon the cultural and intellectual background which produced them. Literature to be read will include both major and minor poetry, prose and drama.
- 302 ENGLISH LITERATURE II** 4 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Studies in English literature from 1800 to present. Emphasis will be given to cultural and intellectual backgrounds and to the development of various modes and genres.
- 315 SHAKESPEARE: THE EARLY PLAYS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Introduction to early drama of Shakespeare with close reading of tragedies, histories and comedies. Includes explanatory lectures of both the plays and their backgrounds.
- 316 SHAKESPEARE: THE MATURE PLAYS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of Shakespeare's plays after 1598, beginning with mature comedies. Concentration on major tragedies and romances.
- 341 AMERICAN LITERATURE I** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Historical survey of major and minor American writers to 1865.
- 342 AMERICAN LITERATURE II** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Readings in major and minor American writers from 1865 to present.
- 350 BLACK AMERICAN LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Survey of representative black American writers from the 19th Century to present, with particular attention to historical and social backgrounds.
- 354 FICTION OF THE SOUTH** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. A study of novels and short stories by major Southern authors such as Faulkner, O'Connor and Styron.
- 360 THE OLD TESTAMENT AS LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. History of Hebrews to 586 B.C., as revealed through epic, fiction, saga and poetry, viewed against background of the Oriental World.
- 361 THE NEW TESTAMENT AND APOCRYPHA AS LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. These two bodies of literature read with emphasis on form of gospel and epistle, and concept of apocalypse. Both are viewed against their historical and social backgrounds.
- 366 EUROPEAN BACKGROUNDS OF ENGLISH LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Representative continental texts from Homer to Cervantes, selected both for their excellence and for their important influence on English and American literature.
- 371 INTRODUCTION TO LINGUISTICS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Broad range of topics on language and introduction to its scientific study. Topics include language origins and history, dialects, sound systems, syntax, semantics, animal language, writing systems and language universals.
- 376 LEGAL WRITING** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Intensive practice in writing for prelaw students through assignments based on actual legal situations and real cases. Particular attention to stating legal issues, writing persuasively, applying rules of law, and other topics that will help those preparing for law school and the profession.
- 377 ADVANCED POETRY WRITING** 3 credits  
Prerequisites: 277, and 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Advanced practice in writing poems, emphasis on shaping publishable works. Survey of market. Class discussion of student poems; individual conference with instructor.
- 378 ADVANCED FICTION WRITING** 3 credits  
Prerequisites: 278, and 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Advanced practice in writing short stories, emphasis on shaping publishable works. Survey of market. Class discussion of student stories; individual conference with instructor.

- 380 FILM CRITICISM** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Application of literary critical theory to the study of film.
- 382 CONTEMPORARY CANADIAN LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Aspects of Canadian literature distinguishing it from other literatures will be identified and analyzed to determine how literature shapes a sense of national identity.
- 386 WOMEN IN MODERN NOVELS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Students will read various modern novels to increase their awareness of how these texts reflect, reinforce, but more often challenge traditional attitudes towards women, their places and circumstances.
- 389 SPECIAL TOPICS: LITERATURE AND LANGUAGE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated for credit as different topics are offered). Traditional and nontraditional topics in English literature and language, supplementing course listed in this General Bulletin, generally constructed around theme, genre and language study.
- 390 PROFESSIONAL WRITING I** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Designed to help prepare student for a career as professional business writer. Stresses theory and practice of written and oral communication in business organization. Individual and group performance, relating to communication theories, concepts of semantics. Functional writing as well as special needs of business are illustrated by actual cases. Adapting style and organization is practiced.
- 391 PROFESSIONAL WRITING II** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Designed to help prepare student for a career as a professional technical writer. Covers principles and practices concerning editing company technical communications, such as specifications, annual reports, promotional brochures for technical products, services, scientific abstracts, proposals. Also treats problems of adapting materials to formats, graphic display of technical information, adaptation of technical material to nontechnical reader.
- 399 THE GOTHIC IMAGINATION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. A loosely chronological study of major British, American, and European authors in the Gothic tradition, from the 18th Century to the present. Attention will be paid to the literary conventions of Gothic fiction, to the "popular" nature of the literature and to its major themes/motifs.
- 400/500 ANGLO SAXON** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Studies in Old English language and Old English prose and poetry, including Beowulf.
- 403/503 DEVELOPMENT OF THE ARTHURIAN LEGEND** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Traces evolution of Arthurian materials from 540 to 1500 and beyond, with emphasis on characters, themes, events and treatments.
- 406/506 CHAUCER** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Close study of Chaucer's major works The Canterbury Tales and Troilus and Criseyde in Middle English.
- 407/507 MIDDLE ENGLISH LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of genres, topics, styles and writers of the Middle English literary works from 12th to 15th Centuries. Readings in Middle English.
- 412/512 SPENSER** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Close reading of major narrative and lyric poems and selections from the minor works, all studied in the context of Elizabethan aesthetic theory, learning and politics.
- 416/516 METAPHYSICAL POETS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Selected 17th-Century British poets exclusive of John Donne. The course examines the particular styles and themes of the secular and sacred poets who wrote in the metaphysical mode. Particular emphasis is placed on Herbert, Crashaw, Vaughan, Traherne, Marvell, Cowley, Cleveland, Southwell and King.
- 421/521 SWIFT AND POPE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. An intensive study of the major satires of Swift and Pope. Concentration on the rhetorical strategies of each author within the context of the shifting intellectual and cultural milieu at the end of the 17th and beginning of the 18th Centuries.
- 424/524 EARLY ENGLISH FICTION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Development of English novel before 1830. Focus on works of Defoe, Richardson, Fielding, Smollett, Sterne, Austen and Scott.
- 425/525 STUDIES IN ROMANTICISM** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Literary, philosophical, psychological and social revolutions of romantic period as reflected in works of such major writers as Wordsworth, Byron and Keats.
- 430/530 VICTORIAN POETRY AND PROSE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Poetry, prose of the late 19th Century, excluding fiction, with attention to Tennyson, Browning, Arnold, Carlyle, Ruskin and other major writers.
- 431/531 VICTORIAN FICTION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Reading of at least five major novels of Victorian era, of varying length, by Emily Bronte, Dickens, Eliot, Thackeray and Hardy. Characterization, theme and attitude toward life emphasized.
- 434/534 CHARLES DICKENS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Growth of Dickens as a novelist, with attention to the social and political backgrounds of the novels and changes in their structure and treatment of character.
- 435/535 20TH CENTURY BRITISH POETRY** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Concentrated study of major poems of Yeats, Eliot and Auden, with attention also to Hardy, Housman, Spender, C. Day Lewis, Dylan Thomas and others.
- 436/536 BRITISH FICTION: 1900-1925** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of Conrad, Joyce, D. H. Lawrence and Virginia Woolf, with attention to their innovations in narrative and style, their psychological realism and symbolism. Brief consideration of other important fiction writers of the period, including Wells, Bennett and Mansfield.
- 437/537 BRITISH FICTION SINCE 1925** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of important British novelists since 1925, excluding Lawrence, Joyce and Woolf. Attention to development of British short story from 1925 to present.
- 439/539 MODERN BRITISH AND IRISH DRAMA** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of major British dramatists, principally those of post-World War II. Focal figures are Shaw, Galsworthy, O'Casey, Osborne, Arden and Pinter.
- 443/543 MELVILLE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. A study of Herman Melville's life and works. Primary emphasis will be on Melville's major fiction (e.g., Moby Dick, The Confidence Man, Billy Budd), but some attention will also be given to his poetry and travel sketches.
- 446/546 AMERICAN AUTOBIOGRAPHY** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. An inquiry into the nature of autobiographical writing, with particular attention to the ontology of the "autobiographical self." Includes such authors as Henry Adams, Sherwood Anderson, Mark Twain, Gertrude Stein, Langston Hughes, William Carlos Williams, Loren Eiseley and Maya Angelou.
- 448/548 AMERICAN ROMANTIC FICTION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Examination of early American fiction, tracing its genesis, romantic period and germinal movements toward realism. Writers discussed include Cooper, Poe, Hawthorne and Melville.
- 449/549 AMERICAN FICTION: REALISM AND NATURALISM** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Examination of American writers of realistic and naturalistic fiction (e.g., Howells, James, Crane, Dreiser), tracing developments in American fiction against background of cultural and historical change.
- 450/550 MODERN AMERICAN FICTION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of significant American short and long fiction from World War I to the present.
- 451/551 AMERICAN POETRY TO 1900** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Survey of American poetry of the 17th, 18th and 19th Centuries.
- 452/552 MODERN AMERICAN POETRY** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Survey of 20th Century American poetry beginning with Edwin Arlington Robinson and ending with contemporary poets.
- 453/553 AMERICAN WOMEN POETS** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of modern poets' uses and revisions of tradition, treatment of relationships between women and men and between women, conceptions of art and of the artist-as-woman, and confrontation of the debate between "public" and "private" poetry.
- 454/554 20TH CENTURY AMERICAN DRAMA** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Examination of major, established playwrights (including O'Neill, Miller and Williams) and sampling of new and rising ones.
- 455/555 THE AMERICAN SHORT STORY** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. A study of the development of the short story as a particularly American genre, from Washington Irving to the present.
- 458/558 FAULKNER** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. An in-depth study of William Faulkner's major novels and short stories, primarily those set in the imaginary Yoknapatawpha region.
- 467/567 MODERN EUROPEAN FICTION** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Representative European writers from about 1850 to present, in translation. Focus on fiction of such writers as Zola, Tolstoy, Dostoyevsky, Mann, Proust, Kafka and Solzhenitsyn.
- 469/569 EROS AND LOVE IN EARLY WESTERN LITERATURE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. An analysis of the use of sex and love in the literature of the Western World from Greco-Roman times to 1800, with special emphasis on how sexuality and "romantic" love are used as allegorical, satiric, fantastic or realistic devices.
- 470/570 HISTORY OF ENGLISH LANGUAGE** 3 credits  
Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Development of English language, from its beginnings: sources of its vocabulary, its sounds, its rules; semantic change; political and social influences on changes; dialect origins; correctness.

**471/571 U.S. DIALECTS: BLACK AND WHITE** 3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of differences in pronunciation, vocabulary and grammar among U.S. language varieties. Origins, regional and social dimensions are explored. Correctness, focusing on black English and Appalachian speech, explored.

**472/572 SYNTAX** 3 credits

Prerequisites: 371, and 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Principles of syntactic description. Sentence structures are investigated from a variety of languages, with emphasis on English.

**473/573 SEMINAR IN TEACHING ESL: THEORY AND METHOD** 3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Theoretical issues in linguistic description and language acquisition as relevant to learning of a second language. Elaboration of principles for the teaching of English as a second language based on research in linguistics, psycholinguistics and second language pedagogy.

**475/575 THEORY OF RHETORIC** 3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Ancient and modern theories of rhetoric, with attention to classical oration, "topics" of rhetoric and their application to teaching of English.

**476/576 THEORY AND TEACHING OF BASIC COMPOSITION** 3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Review of current research and exploration of specific instructional methods for teaching basic composition.

**482 SENIOR HONORS PROJECT IN ENGLISH** 1-3 credits

(May be repeated for a total of six credits). Prerequisites: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor, senior standing in Honors Program and approval of honors preceptor; open only to English majors enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

**483/583 FANTASY AND SCIENCE FICTION** 3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Selected British and American fantasy and science fiction from the 1880s to the present.

**484/584 FANTASY** 3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. A study of forms of literature, primarily fiction, based on and controlled by an overt violation of what is generally considered as possibility.

**489/589 SEMINAR IN ENGLISH** 2-3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated with different topics.) Special studies, and methods of literary research, in selected areas of English and American literature and language.

**490/590 WORKSHOP IN ENGLISH** 1-3 credits

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated with different topics) Group studies of special topics in English. Cannot be used to meet undergraduate or graduate major requirements in English; for elective credit only.

**498 INDEPENDENT STUDY** 1-3 credits

Prerequisite: completion of 3300:111 and 3300:112 or their equivalents. Directed study in a special field of interest chosen by student in consultation with instructor.

## GEOGRAPHY AND PLANNING

### 3350:

**100 INTRODUCTION TO GEOGRAPHY** 3 credits

Analysis of world patterns of population characteristics, economic activities, settlement features, landforms, climate as interrelated factors.

**300 GEOGRAPHY OF TRAVEL AND TOURISM** 3 credits

Prerequisite: 100. Examination of the spatial, cultural, and regional economic impact of tourism and travel; consideration of modes and purposes, origins/destinations, and tourism development and planning.

**310 PHYSICAL AND ENVIRONMENTAL GEOGRAPHY** 3 credits

Landforms, weather and climate, soils and vegetation and natural hazards. Nature and distribution of these environmental elements and their significance to society. Laboratory.

**314 CLIMATOLOGY** 3 credits

Prerequisite: 310 or permission. Analysis and classification of climates, with emphasis on regional distribution. Basic techniques in handling climate data.

**320 ECONOMIC GEOGRAPHY** 3 credits

Geographical basis for production, exchange, consumption of goods. Effect of economic patterns on culture and politics.

**326 ENERGY AND ECOLOGY** 3 credits

Prerequisite: 320 or permission. Traditional fossil fuels and recently developed alternative sources of energy studied along with electricity production. Production and consumption patterns, effects of conservation and environmental damage and energy policy considered.

**330 RURAL AND URBAN SETTLEMENT** 3 credits

Origin, function and rationale of settlements. Includes analysis of rural settlement landscape as well as fundamentals of urban geography.

**335 RECREATION RESOURCE PLANNING** 3 credits

Prerequisite: 330 or permission. Effect of physical and economic environment on recreational patterns. Case studies of important recreational activities and areas in which tourism contributes significantly to the area economy.

**340 CARTOGRAPHY** 3 credits

Use of graphic/cartographic principles and techniques as a means of presenting information.

**341 MAPS AND MAP READING** 3 credits

Interpretation and use of various map materials. Study of basic map elements, symbolism and methods of creating maps. Historical aspects associated with these developments also considered. Laboratory.

**350 GEOGRAPHY OF THE UNITED STATES AND CANADA** 3 credits

Prerequisite: 100 or permission. Regional and topical study of United States and Canada, with emphasis on environmental, economic and cultural patterns and their interrelationships.

**351 OHIO: ENVIRONMENT AND SOCIETY** 3 credits

Regional and topical analysis of cultural, economic and environmental patterns; also in comparison with other states.

**353 LATIN AMERICA** 3 credits

Prerequisite: 100 or permission. Analysis of relationship of cultural and economic patterns to physical environment in Mexico, Central America, the Caribbean and South America.

**356 EUROPE** 3 credits

Prerequisite: 100 or permission. Regional and topical analysis of cultural, economic and environmental patterns.

**358 U.S.S.R.** 3 credits

Prerequisite: 100 or permission. Regional and topical analysis of cultural, economic and environmental patterns, with comparison to other major world regions.

**380 ASIA** 3 credits

Prerequisite: 100 or permission. Environmental, cultural and economic geography of East, Southeast, South Asia and Middle East with emphasis on the contemporary.

**363 AFRICA SOUTH OF THE SAHARA** 3 credits

Prerequisite: 100 or permission. Environmental and human bases of regional contrasts. Emphasis on tropical environmental systems and changing patterns of resource utilization.

**375 GEOGRAPHY OF CULTURAL DIVERSITY** 2 credits

Evaluation of cultural elements unique to various geographical regions to explain why different people utilize resources differently, and how cultural diversity affects regional conflicts.

**385 PLANNING SEMINAR** 1 credit

Prerequisite: permission of instructor. Development of planning studies including completion of paper covering a planning topic in depth. Projects are presented by student and critically analyzed.

**397 SPECIAL PROBLEMS** 1-3 credits

(May be repeated for a total of five credits) Prerequisite: permission of instructor. Directed reading and research in special field of interest.

**405/505 GEOGRAPHIC INFORMATION SYSTEMS** 3 credits

Prerequisites: six credits of advanced geography courses at the 300 level or above, but not including regional courses; or permission. Requirements and techniques for using all types of Geographic Information Systems (GIS). For students wishing to become applied geographers, physical and social scientists, resource managers, planners, environmental analysts.

**422/522 TRANSPORTATION SYSTEMS PLANNING** 3 credits

Prerequisite: 320 or permission. Study and analysis of transportation systems from a geographic perspective. Emphasis on transportation problems and issues, elements of transportation planning.

**428/528 INDUSTRIAL AND COMMERCIAL SITE LOCATION** 3 credits

Prerequisite: 320 or permission. Relationship between land, resources, population, transportation and industrial and commercial location processes.

**433/533 INTRODUCTION TO PLANNING** 3 credits

Introduction to the history, theories and forms of urban planning.

**436/536 URBAN LAND USE ANALYSIS** 3 credits

Prerequisite: 330 or permission. Land use classification systems and their spatial variation in urban areas. Land use data are collected by student by field work and analyzed to identify the associations and structure of subregions.

**438/538 WORLD METROPOLITAN AREAS** 3 credits

Prerequisite: 330 or permission. Comparative analysis of metropolitan regions. Urbanism, land use, housing, transportation, population and role of cities in economic development in different cultures.

**442/542 THEMATIC CARTOGRAPHY** 3 credits

Prerequisite: 341 or permission. Principles and techniques used in thematic mapping. Stresses use of maps to indicate certain characteristics of classes of information both qualitative and quantitative.

**444/544 MAP COMPILATION AND REPRODUCTION** 3 credits

Prerequisite: 341 or permission. Production of new/improved maps from existing maps, aerial photographs, surveys, new data and other sources. Includes special cartographic considerations for photography, lithography and printing.

**447/547 INTRODUCTION TO REMOTE SENSING** 3 credits

Prerequisite: 341 or permission. Study of aerial photography and non-photographic imagery developed by radar, thermal, multispectral and satellite scanners. Emphasis on use in geographical, geological, biological and engineering research.

**448/548 AUTOMATED COMPUTER MAPPING** 3 credits

Prerequisite: 341 or permission. Study of computer-assisted map compilation and execution. Emphasis on integration of computer and cartographic skills and techniques. Problems adapted to specialized interests of student.

**449/549 ADVANCED REMOTE SENSING** 3 credits

Prerequisite: 447/547 or permission. Current research in remote sensing. Applications in study of human cultural and biophysical environment. Practice in planning, design, execution and interpretation of remote sensing studies.

**450/550 DEVELOPMENT PLANNING** 3 credits

A study of planning concepts and techniques for developing countries, including growth and development, planning agencies, regional inequities and alternative approaches.

- 471/571 MEDICAL GEOGRAPHY AND HEALTH PLANNING** 3 credits  
Spatial analysis of diseases; their socioeconomic correlates; diffusion pattern of infectious diseases with particular reference to North America; health-planning processes and spatial analysis of health-care delivery systems.
- 481/581 GEOGRAPHIC RESEARCH METHODS** 3 credits  
Prerequisites: 12 credits in geography. Techniques in geographic research. Library resources, techniques of professional writing.
- 483/583 SPATIAL ANALYSIS** 3 credits  
Prerequisite: 481/581 or permission. Analysis of mapped statistical surfaces. Principles for use of map as model for statistical evidence, prediction, hypothesis testing.
- 489/589 SPECIAL TOPICS IN GEOGRAPHY** 1-3 credits  
(May be repeated) Selected topics of interest in geography.
- 490/590 WORKSHOP IN GEOGRAPHY** 1-3 credits  
(May be repeated for a total of six credits) Group studies of special topics in geography.
- 495/595 SOIL AND WATER FIELD STUDIES** 3 credits  
Prerequisite: 310 or permission. Properties, origins and uses of major soil and water regime landscapes. Stresses relationships between soil and the hydrological cycle, urbanization, suburbanization and agriculture. Field trips required.
- 496/596 FIELD RESEARCH METHODS** 3 credits  
Prerequisite: 481/581 or permission. Field work enabling student to become competent in collecting, organizing and analysis of data while carrying out field research projects.
- 498 HONORS RESEARCH IN GEOGRAPHY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of department honors preceptor, honors student only. Exploration of research topics and issues in contemporary geography. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member.
- 100 EARTH SCIENCE** 3 credits  
Introduction to earth science for non-science majors. Survey of earth in relation to its physical composition, structure, history, atmosphere, oceans; and relation to solar system and universe.
- 101 INTRODUCTORY PHYSICAL GEOLOGY** 4 credits  
Comprehensive survey of minerals, rocks, structures and geologic processes of solid earth. Laboratory.
- 102 INTRODUCTORY HISTORICAL GEOLOGY** 4 credits  
Prerequisite: 101. Geologic history of earth, succession of major groups of plants and animals interpreted from rocks, fossils. Laboratory.
- 103 NATURAL SCIENCE: GEOLOGY** 3 credits  
Study of basic principles and investigative techniques in various fields of geology with emphasis on relationship of geologic processes to society.
- 121-138 CONCEPTS IN GEOLOGY** 1 credit each  
A series of one-credit modules designed to introduce specific topics of science and the scientific method from the perspective of geologists.
- 121 DINOSAURS** 1 credit  
Introductory course exploring the geological occurrence, mode of fossilization, evolutionary development, habits, and sudden extinction of the largest known land vertebrates.
- 122 MASS EXTINCTIONS AND GEOLOGY** 1 credit  
Catastrophic changes in plants and animals have occurred throughout Earth history. The causes of these extinctions have sparked debate which has enlivened the scientific world.
- 123 INTERPRETING EARTH'S GEOLOGIC HISTORY** 1 credit  
An introduction to geological techniques and reasoning used to develop theories and interpretations of earth history. Exercises allowing students to develop interpretations.
- 124 PLATE TECTONICS: THE NEW GEOLOGY** 1 credit  
Plate tectonic theory is the solution to the origin of: the oceans and mountains, earthquakes and volcanoes, mineral deposits, and many other geological riddles.
- 125 EARTHQUAKES: WHY, WHERE, WHEN?** 1 credit  
Causes and effects of earthquakes, geological settings for earthquakes, seismic measurements, mechanical response of rock to stress, earthquake prediction and precautionary measures.
- 126 NATURAL DISASTERS AND GEOLOGY** 1 credit  
A study of the geologic setting and processes related to natural hazards such as landslides, floods, earthquakes, and volcanic eruptions.
- 127 THE ICE AGE AND OHIO** 1 credit  
Introductory course covering the effects of the ice age on the geology, vegetation, fauna and economy of Ohio.
- 128 GEOLOGY OF OHIO** 1 credit  
Survey of Ohio's geologic setting and history, natural resources, landforms, and their significance in terms of human activity, from early settlement to future economy.
- 129 MEDICAL GEOLOGY** 1 credit  
Abundance and distribution of trace elements in surface and groundwater, soils and rocks. The effects of trace elements to health through dose-response relationships.
- 130 GEOLOGIC RECORD OF CLIMATE CHANGE** 1 credit  
Examines evidence of natural climate changes in geologic past and evaluates the role of modern society in influencing future climate.

## GEOLOGY

### 3370:

- 131 GEOLOGY AND SOCIETY** 1 credit  
Discussion of how geology has influenced the growth of societies and how governmental regulation affects the development and exploitation of geological resources.
- 132 GEMSTONES AND PRECIOUS METALS** 1 credit  
Introduction to minerals which form gemstones and precious metals. Topics to be covered include physical properties, geologic occurrences and geographic locations of major deposits.
- 133 CAVES AND REEFS** 1 credit  
Topics include: karst processes and the origin of caverns; carbonate depositional environments and the origin of limestones; environmental problems associated with karst landscapes.
- 134 HAZARDOUS AND NUCLEAR WASTE DISPOSAL** 1 credit  
Disposition of hazardous waste in secured landfill site. Geologic factors which determine the selection of low-level and high-level radioactive waste sites.
- 135 GEOLOGY OF ENERGY RESOURCES** 1 credit  
Topics include the origin of hydrocarbon and coal deposits, methods of petroleum exploration, global distribution of hydrocarbon resources.
- 136 EARTH'S OCEANS** 1 credit  
Introduction to the geological evolution of oceans and discussion of factors controlling ocean currents, tides and development of coastlines.
- 137 EARTH'S ATMOSPHERE AND WEATHER** 1 credit  
Structure and composition of the atmosphere; earth's radiation budget; atmospheric moisture, clouds and precipitation; weather systems and storms, severe weather, Ohio weather.
- 138 PLANETARY GEOLOGY** 1 credit  
Solar system characteristics and formation; structure, composition and geology of terrestrial and Jovian planets and their satellites; comets, asteroids, meteorites and their relationship to Earth.
- 200 ENVIRONMENTAL GEOLOGY** 3 credits  
Analysis of geologic aspects of the human environment with emphasis on geologic hazards and environmental impact of society's demand for water, minerals and energy.
- 201 EXERCISES IN ENVIRONMENTAL GEOLOGY I** 1 credit  
Prerequisite or corequisite: 200. Recognition, evaluation of environmental problems related to geology through field, laboratory exercises and demonstrations which apply concepts from 200. Laboratory.
- 202 GEOLOGY OF THE NATIONAL PARKS** 3 credits  
Prerequisite: 100 or 101 or 103. Geologic setting of major national parks, interpreted in terms of geological principles and processes which shaped them in past and/or currently affect them, including the rock cycle, evolution of landscapes and plate tectonics.
- 203 EXERCISES IN ENVIRONMENTAL GEOLOGY II** 1 credit  
Prerequisites: 200 (or corequisite) and 201. Recognition and evaluation of environmental problems related to geology. (Continuation of 201) Laboratory.
- 230 CRYSTALLOGRAPHY AND NON-SILICATE MINERALOGY** 3 credits  
Prerequisites: 101 and 3150:151, 152. Morphological crystallography and crystal chemistry of minerals, followed by physical and chemical properties, crystal structure, occurrence and uses of the common non-silicate minerals. Laboratory.
- 231 SILICATE MINERALOGY AND PETROLOGY** 3 credits  
Prerequisites: 101 and 3150:151, 152. Recommended: 230. Physical and chemical properties, crystal structure, occurrence, and uses of common silicate minerals, followed by megascopic identification, classification, and petrogenesis. Laboratory.
- 271 OCEANOGRAPHY** 3 credits  
Prerequisite: 101. Introduction to physical processes, geologic history and development of marine areas.
- 301 ENGINEERING GEOLOGY** 3 credits  
Prerequisites: Four credits in introductory physical geology and permission. Presents quantitative analyses of geologic features and processes and is supported by the study of case histories. Lecture, lab, and field study.
- 310 GEOMORPHOLOGY** 3 credits  
Prerequisite: 101. Study of landforms as a function of structure, process, and time. Laboratory.
- 324 SEDIMENTATION AND STRATIGRAPHY** 4 credits  
Prerequisites: 102 and 231. Introduction to sedimentary processes and environments; stratigraphic principles and techniques. Hand specimens, thin sections, and sedimentary sequences studied. Laboratory.
- 350 STRUCTURAL GEOLOGY** 4 credits  
Prerequisite: 101 or permission. Origins and characteristics of folds, faults, joints and rock cleavage. Structural features of sedimentary, igneous and metamorphic rocks. Laboratory.
- 360 INTRODUCTORY INVERTEBRATE PALEONTOLOGY** 4 credits  
Prerequisite: 102 or permission. Introductory course emphasizing morphology and evolution of major invertebrate groups with consideration of practical applications of paleontology. Laboratory.
- 410/510 REGIONAL GEOLOGY OF NORTH AMERICA** 3 credits  
Prerequisites: 101, 102, or permission; recommended: 350. Examination of physiographic provinces of North America emphasizing structure, tectonic setting, stratigraphy and processes responsible for landforms in each province. Laboratory.
- 411/511 GLACIAL GEOLOGY** 3 credits  
Prerequisite: permission. Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and world climatic changes. Laboratory.
- 421/521 COASTAL GEOLOGY** 3 credits  
Prerequisites: 101, 324 or permission of instructor. Study of the origins and evolution of coasts and coastal deposits with particular attention paid to the interaction of waves and currents with sediment, and the development of associated sedimentary features.
- 425/525 ADVANCED STRATIGRAPHY** 3 credits  
Prerequisites or corequisites: 360, 324 or permission. Emphasis on correlation, depositional systems, sedimentation and tectonics, seismic stratigraphy, and terrain analysis. Laboratory in the field.

- 432/532 OPTICAL MINERALOGY-INTRODUCTORY PETROGRAPHY** 3 credits  
Prerequisites: 230 and 231. Optical techniques for identification, characterization, and classification of minerals and rocks using the petrographic microscope. Laboratory.
- 433/533 ADVANCED PETROLOGY** 3 credits  
Prerequisite: 432/532. Petrogenesis of igneous, metamorphic and sedimentary rocks as determined by microscopic studies of textures and mineral assemblages using thin sections. Laboratory.
- 435/535 PETROLEUM GEOLOGY** 3 credits  
Prerequisite: 350 or permission; recommended: 324. Natural occurrences of petroleum. Characteristics, origin, entrapment and exploration methods. Laboratory.
- 436/536 COAL GEOLOGY** 3 credits  
Prerequisites: 101, 102; recommended: 324. Origin, composition and occurrence of coal with emphasis on depositional environments, coalification processes, exploration, evaluation and exploitation. Laboratory.
- 437/537 ECONOMIC GEOLOGY** 3 credits  
Prerequisites: 231 and 350. Study of metallic and nonmetallic mineral deposits emphasizing paragenesis and exploration. Laboratory.
- 441/541 FUNDAMENTALS OF GEOPHYSICS** 3 credits  
Prerequisites: 3450:223 or permission and 3650:292. Fundamental concepts in solid earth geophysics, planetary physics, geodesy, and geomagnetism. Contributions of geophysics to recent major developments in geoscience.
- 446/546 EXPLORATION GEOPHYSICS** 3 credits  
Prerequisites: 3450:223, 3650:292 or permission. Basic principles and techniques of geophysical exploration with emphasis on gravimetric, magnetic, seismic and electrical methods and application to geological problems. Laboratory.
- 449/549 BOREHOLE GEOPHYSICS** 3 credits  
Prerequisite: permission. Basic principles and techniques of geophysical well logging with emphasis on electrical, radioactive, and sonic measures and their quantitative evaluation. Applications in oil, gas, and groundwater exploration. Laboratory.
- 450/550 ADVANCED STRUCTURAL GEOLOGY** 3 credits  
Prerequisite: 350 or permission. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory.
- 463/563 MICROPALAEONTOLOGY** 3 credits  
Prerequisite: 360 or permission. Introduction to techniques of micropaleontology evolution and paleoecology of selected microfossil groups. Laboratory.
- 470/570 GEOCHEMISTRY** 3 credits  
Prerequisite: 101, 230, and 231, 3150:151, 152 and 153 or permission. Application of chemical principles to the study of geologic processes. Laboratory.
- 474/574 GROUNDWATER HYDROLOGY** 3 credits  
Prerequisite: 101. Origin, occurrence, regimen and utilization of groundwater. Qualitative and quantitative presentation of geological and geochemical aspects of groundwater hydrology. Laboratory.
- 480/580 WORKSHOP** 1-3 credits  
(May be repeated) Group studies of special topics in geology. May not be used to meet undergraduate or graduate major requirements in geology. May be used for elective credit only.
- 493/593 GEOLOGY FIELD CAMP I** 3 credits  
Prerequisites: 101 and 102 and permission; Introduction to collection and interpretation of field data and construction of geologic maps.
- 494/594 GEOLOGY FIELD CAMP II** 3 credits  
Prerequisites: 231, 350, 493/593, or permission. Advanced techniques and methods of field geology necessary for detailed geologic maps and interpretations.
- 495 FIELD STUDIES IN GEOLOGICAL STRUCTURES AND PROCESSES** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Field trip course emphasizing phases of geology not readily studied in Ohio. Includes pretrip preparation and post-trip examination. Student will bear trip expenses.
- 497 SENIOR HONORS PROJECT IN GEOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program, permission of department honors preceptor and major in geology or natural science. Independent research leading to completion of senior honors thesis or other original work under guidance of student's honors project adviser.
- 498 SPECIAL TOPICS** 1-3 credits  
Prerequisite: permission of instructor. Special lecture courses offered once or only occasionally in areas where no formal course exists.
- 499 RESEARCH PROBLEMS** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Directed reading and research in an aspect of geology chosen by student in consultation with an instructor.
- 211 HUMANITIES IN THE WESTERN TRADITION II: REFORMATION TO THE PRESENT** 4 credits  
Prerequisite: 3400:210. Introduction to the human condition in the past as manifested in the ideas, religions, visual arts and music of Western civilization from the Protestant Reformation to the Present. Cannot be used to meet major requirements in History.
- 250 UNITED STATES HISTORY TO 1877** 4 credits  
Historical survey from the Age of Discovery and North American colonization through the creation of the United States to the Civil War and Reconstruction.
- 251 UNITED STATES HISTORY SINCE 1877** 4 credits  
Survey of United States history from the end of Federal Reconstruction to the present.
- 260 AFRICAN-AMERICAN PEOPLE OF THE UNITED STATES** 3 credits  
Survey of social, economic, political and cultural history of African-Americans from 17th Century to present.
- 300 IMPERIAL CHINA** 3 credits  
Selective study of institutional, intellectual, political and artistic developments in Chinese civilization from antiquity to 18th Century. Emphasis on general features of traditional Chinese culture.
- 301 REVOLUTIONARY CHINA** 3 credits  
Survey of China since 18th Century with focus on process of modernization. Background of contemporary scene stressed.
- 303 JAPAN** 3 credits  
Survey of history of Japan from 1600 to present. Emphasis on modernization and the rise of Japanese empire, 1894-1945.
- 307 ANCIENT NEAR EAST** 3 credits  
Mesopotamia, Egypt; Israel, and neighbors to Persian Empire.
- 308 GREECE** 3 credits  
Minoans and Mycenaeans; classical Greece to triumph of Macedon.
- 310 HISTORICAL METHODS** 3 credits  
Introduction to historical research and writing. Required for history major.
- 313 EASTERN ROMAN EMPIRE** 3 credits  
Byzantine culture and history from 324 to the fall of 1453.
- 317 ROMAN REPUBLIC** 3 credits  
An intensive survey of the Roman Republic. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.
- 318 ROMAN EMPIRE** 3 credits  
An intensive survey of the Roman Empire. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.
- 319 MEDIEVAL EUROPE, 500-1200** 3 credits  
Migration of peoples, Carolingian revival, renewed invasions; social, economic and intellectual stirrings lead to "birth of Europe."
- 320 MEDIEVAL EUROPE, 1200-1500** 3 credits  
Middle Ages and the middle class; economic and political change, international wars, social unrest and religious crosscurrents.
- 321 EUROPE: RENAISSANCE TO RELIGIOUS WARS, 1350-1610** 3 credits  
Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Italian Renaissance to the early 17th century.
- 322 EUROPE: ABSOLUTISM TO REVOLUTION, 1610-1789** 3 credits  
Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Thirty Years War to the French Revolution.
- 323 EUROPE FROM REVOLUTION TO WORLD WAR, 1789-1914** 3 credits  
Surveys the political, economic, social, and cultural history of modern Europe from the French Revolution to the First World War.
- 324 EUROPE FROM WORLD WAR I TO THE PRESENT** 3 credits  
A survey of European political and social history from World War I to the present.
- 325 WOMEN IN MODERN EUROPE** 3 credits  
A survey of the history of women in Europe since 1500, with emphasis on their roles and the changes attendant on modernization.
- 335 RUSSIA TO 1801** 3 credits  
Survey of Russian history from Kievan period to death of Paul I, emphasizing development of autocratic government, Russian culture, reigns of Peter and Catherine.
- 336 RUSSIA SINCE 1801** 3 credits  
Survey of 19th and 20th Centuries. Special emphasis on problems of modernization, the revolution and development of communism.
- 337 FRANCE FROM NAPOLEON TO DeGAULLE** 3 credits  
Combines a study of Napoleon and DeGaulle with a survey of the political, economic, social, and cultural/artistic trends of modern French history.
- 338 ENGLAND TO 1688** 3 credits  
Survey of English history from the Angli-Saxon conquest to the Revolution of 1688. Medieval and early modern institutions, social and cultural life.
- 339 ENGLAND SINCE 1688** 3 credits  
Survey of English history from 1688 to the present. The reform of English institutions and life, modernization of the economy, the welfare state, society and war.
- 340 SELECTED TOPICS** 3 credits  
Includes experimental offerings such as those crossing subject of chronological lines, and subjects not listed in this General Bulletin. See departmental office for current subject.
- 350 WOMEN IN THE UNITED STATES** 3 credits  
Changing roles, status, self-images and activities of women in context of American social, economic, political and intellectual movements.

## HISTORY

### 3400:

- 200 EMPIRES OF ANCIENT ASIA** 3 credits  
Comparative study of the formative empires East, South, and western Asia. Emphasis on the origins and development of core institutions and early writings.
- 210 HUMANITIES IN THE WESTERN TRADITION I: ANTIQUITY TO THE RENAISSANCE** 4 credits  
Prerequisites: 32 credits and completion of 3300:112. Introduction to the human condition in the past as manifested in the ideas, religions, visual arts and music of Western civilization from the ancient Greeks through the Renaissance. Cannot be used to meet major requirements in History.

- 352 THE WEST IN THE DEVELOPMENT OF THE UNITED STATES** 3 credits  
Examination of westward movement from revolution to closing of frontier; types of frontiers; impact of west on nation's development.
- 354 AMERICAN IMMIGRATION** 3 credits  
Examination of European migrants to American colonies and United States, their reasons for leaving Europe and coming to America, and their experience after arrival.
- 356 SPORTS IN AMERICAN HISTORY SINCE 1865** 3 credits  
An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, diplomacy and gender.
- 358 THE AMERICAN CITY** 3 credits  
Development of urbanization and its consequences from colonial period to present.
- 364 AMERICAN FAMILY HISTORY** 3 credits  
Evolution of American family, colonial times to present, including developments in structure and roles of family members, and status of the aged. Exploration of methods for historical study of the family.
- 366 HISTORY OF AMERICAN TRANSPORTATION** 3 credits  
A survey of development of major transportation forms, water, road, rail and air. Special emphasis on technological change, social and economics trends, and government support and control.
- 370 EVOLUTION OF AMERICAN BUSINESS** 3 credits  
An examination of the development of the American business system from the Colonial era to the present.
- 380 WAR AND PEACE: THE HISTORICAL PERSPECTIVE** 3 credits  
Historical examination of theories of war and peace, including study of leaders, groups and ideas for peace.
- 382 THE VIETNAM WAR** 3 credits  
An examination and evaluation of all aspects of the war in Vietnam, political, military, diplomatic and economic, including its impact domestically then and later.
- 383 SOVIET AND UNITED STATES WOMEN IN THE TWENTIETH CENTURY** 3 credits  
An historical and comparative study of the status of women in both societies, with special attention to changing conditions, the efforts by women, individually and collectively, to define and shape role.
- 385-391 WORLD CIVILIZATIONS**  
Courses 385 through 391 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses can not be used to meet major requirements in History.
- 385 WORLD CIVILIZATIONS: CHINA** 2 credits  
Prerequisite: 64 credits.
- 386 WORLD CIVILIZATIONS: JAPAN** 2 credits  
Prerequisite: 64 credits.
- 387 WORLD CIVILIZATIONS: SOUTHEAST ASIA** 2 credits  
Prerequisite: 64 credits.
- 388 WORLD CIVILIZATIONS: INDIA** 2 credits  
Prerequisite: 64 credits.
- 389 WORLD CIVILIZATIONS: NEAR EAST** 2 credits  
Prerequisite: 64 credits.
- 390 WORLD CIVILIZATIONS: AFRICA** 2 credits  
Prerequisite: 64 credits.
- 391 WORLD CIVILIZATIONS: LATIN AMERICA** 2 credits  
Prerequisite: 64 credits.
- 397 INDIVIDUAL STUDY OR RESEARCH IN HISTORY** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. For individual study or research in history, including special projects, summer study tours or specialized training.
- 400/500 WOMEN IN REVOLUTIONARY CHINA** 3 credits  
Prerequisites: 3400/300, 301 or 1100/330, or permission of instructor. A study of the changes in women's lives in China during the late imperial (1644-1911) and socialist (1949-1989) periods.
- 401/501 IMPERIALISM IN EAST ASIA** 3 credits  
An examination of the East Asian relations in the modern period, highlighting China's response to British, Russian, and Japanese imperialism in the 19th and 20th centuries.
- 416/516 MODERN INDIA** 3 credits  
History of the Indian subcontinent from c. 1500 with emphasis on India society and culture, British imperialism, and the emergence of Indian nationalism.
- 424/524 THE RENAISSANCE** 3 credits  
The age of transition from the Middle Ages to modern times (1350-1600). Special emphasis on intellectual trends, the development of humanism, and the fine arts.
- 425/525 THE REFORMATION** 3 credits  
Europe in 16th Century; its religious, cultural, political and diplomatic development, with special emphasis on Protestant, Anglican and Catholic reformations.
- 429/529 EUROPE IN THE FRENCH REVOLUTIONARY ERA, 1789-1815** 3 credits  
Development of Revolution; Napoleon's regime and satellites.
- 438/538 NAZI GERMANY** 3 credits  
This course covers the social, economic, and political history of Germany from World War I to 1945 with emphasis on the Third Reich.
- 439/539 EUROPE IN THE COLD WAR** 3 credits  
Prerequisite: Six hours of 3400 courses at the 200 or 300 level, or permission of the instructor. The political, social, and cultural history of Europe from the end of the Second World War to the Revolutions of 1989.
- 440/540 TUDOR AND STUART ENGLAND, 1485-1714** 3 credits  
Emphasis on social, economic and cultural topics, including literature, art and architecture.
- 443/543 CHURCHILL'S ENGLAND** 3 credits  
An examination of the changes that Britain experienced during the life of Winston Churchill, 1874-1965. Emphasis is on cultural, social, and political developments.
- 450/550 THE AMERICAN COLONIES IN THE 17TH CENTURY, 1607-1713** 3 credits  
Establishment of European colonies in America with special emphasis on English settlements and evolution of the first British Empire to 1713.
- 451/551 THE 18TH CENTURY COLONIES AND FOUNDING OF THE U.S., 1713-1800** 3 credits  
Colonial life from the Glorious Revolution to the founding of the United States. Major movements (wars, religious revivals, economic growth) and political controversies.
- 452/552 THE AMERICAN REVOLUTIONARY ERA: POLITICAL, MILITARY, AND CONSTITUTIONAL ASPECTS** 3 credits  
The struggle for the rights of Englishmen and independence; the impact of war on American society and the creation of republican institutions.
- 453/553 AGE OF JEFFERSON AND JACKSON, 1800-1850** 3 credits  
The evolution of the republic in its formative stages from Jefferson through Jackson to the Compromise of 1850. Emphasis upon political, social, intellectual and Constitutional developments.
- 454/554 THE CIVIL WAR AND RECONSTRUCTION, 1850-1877** 4 credits  
Sectionalism, slavery and the causes of the Civil War; wartime activities of the Union and Confederacy; leading personalities; problems of reconstruction and the new Union.
- 455/555 THE ORIGINS OF MODERN AMERICA, 1877-1917** 3 credits  
United States from Reconstruction Era to World War I (1877-1920); emphasis on political responses to rise of an industrialized-urbanized society, the populist and progressive movements.
- 456/556 AMERICA IN WORLD WARS AND DEPRESSION, 1917-1945** 3 credits  
World War I and Versailles; the 1920s, the Great Depression and the New Deal; World War II.
- 457/557 RECENT AMERICA: THE UNITED STATES SINCE 1945** 3 credits  
Nuclear age, cold war, foreign policy and domestic affairs to present. Social, political, constitutional, diplomatic, cultural and economic changes since 1945.
- 460/560 UNITED STATES DIPLOMACY TO 1919** 3 credits  
Establishment of basic policies, diplomacy of expansion and emergence of a world power.
- 461/561 UNITED STATES DIPLOMACY SINCE 1914** 3 credits  
Responses of government and public to challenges of war, peace making and power politics.
- 464/564 AMERICAN ECONOMY TO 1900** 3 credits  
Survey of economic developments from colonial era; including agriculture, commerce, labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.
- 465/565 AMERICAN ECONOMY SINCE 1900** 3 credits  
Survey of economic developments since 1900; topics include agriculture, business and labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.
- 466/566 UNITED STATES SOCIAL-CULTURAL HISTORY TO 1877** 3 credits  
Concepts and attitudes considered in their social, cultural framework. Emphasis on population growth, rural and urban life, literature, the arts, family life, slavery and impact of Civil War.
- 467/567 UNITED STATES SOCIAL-CULTURAL HISTORY SINCE 1877** 3 credits  
Concepts and attitudes; emphasis on business; agrarianism; self-made individuals; progressivism; impact of world wars; social-economic planning; trends in literature and art; social structure and change; black Americans; women's movements.
- 468 AFRICAN-AMERICAN SOCIAL AND INTELLECTUAL HISTORY** 3 credits  
Examination of black thought and activities reflective of African-American culture, conditions facing black people within America and efforts toward coordinated black activity.
- 470/570 OHIO HISTORY** 3 credits  
Political, social, economic and intellectual history of Ohio, with special emphasis on Ohio's relationship to Old Northwest and to the nation.
- 471/571 AMERICAN ENVIRONMENTAL HISTORY** 3 credits  
Utilization, conservation of natural resources from beginnings of American society to present; combination of economic, technological history of extensive treatment of public policy, environmental issues.
- 472/572 LATIN AMERICA: ORIGINS OF NATIONALITY** 3 credits  
Pre-Columbian civilizations, discovery and conquests; colonialism, struggle for independence and formation of new societies.
- 473/573 LATIN AMERICA: THE TWENTIETH CENTURY** 3 credits  
Social revolution, political ideology and contemporary problems.
- 474 THE UNITED STATES, LATIN AMERICA, AND IMPERIALISM** 3 credits  
Inter-American relations, militarism, dependency, Marxism, and recent international and ideological trends.
- 475/575 MEXICO** 3 credits  
History of Mexico from Indian civilization to present with emphasis on relations with United States; social and political ramifications of the 20th Century Mexican revolution.
- 476/576 CENTRAL AMERICA AND THE CARIBBEAN** 3 credits  
Selected aspects of the histories of Central American and Caribbean countries with emphasis on populist and peasant movements, political reform, social revolution, economic and under development, and relations with the United States.
- 481/581 HISTORY OF CANADA** 3 credits  
Survey of Canadian history from the age of the explorers to the present. Special emphasis will be placed on the history of French-Canadians, on economic development and on Canadian-American relations.
- 482/582 WAR AND WESTERN CIVILIZATION** 3 credits  
War and society in Europe, America and beyond from ancient world to present with special emphasis on period since 1740.

- 484/584 HISTORICAL AGENCY ADMINISTRATION** 3 credits  
Organization and administration of non-academic historical agencies (e.g. societies, museums, libraries, etc.). Some field experience in a local historical agency.
- 485/585 FUNCTIONS OF HISTORICAL AGENCIES** 3 credits  
Prerequisite: 410/510 or permission. The functions and programs of historical agencies. Students will develop a project that involves participating in an agency function.
- 486/586 WESTERN SCIENCE TO 1800** 3 credits  
Science in Greek, Roman, Islamic, European societies with special emphasis on the scientific revolution of the 16th and 17th Centuries.
- 487/587 WESTERN SCIENCE SINCE 1800** 3 credits  
Continuing development of physical, medical, biological sciences in European and American societies. Atomic physics and weapons, evolution, genetics, modern medicine.
- 488/588 WESTERN TECHNOLOGY** 3 credits  
Technology in Mesopotamia, Egypt, Greece, Rome, Islam, medieval Europe; first and second industrial revolutions in Europe, America.
- 491 HONORS SEMINAR** 3 credits  
Prerequisite: permission of department head or instructor. Selected readings; writing of research paper. For student seeking to graduate with honors in history and for student in Honors Program.
- 492 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. An individual research project relevant to history, supervised by a member of the Department of History, culminating in an undergraduate thesis.
- 493/593 SPECIAL STUDIES IN HISTORY** 3 credits  
Includes experimental and interdisciplinary studies, as well as those subjects that are not listed in this General Bulletin. See departmental office for information on particular offerings.
- 494/594 WORKSHOP IN HISTORY** 1-3 credits  
(May be repeated) Group studies of special subjects pertaining to history. May be used for elective credit only. May not be used to meet undergraduate or graduate major requirements in history.
- 208 INTRODUCTION TO DISCRETE MATHEMATICS** 4 credits  
Prerequisites: 145 or 149 or placement. A foundation course in discrete mathematics with applications. Topics include sets, number systems, Boolean Algebra, logic, relations, functions, recursion, matrices, induction, graphs, and trees.
- 215 CONCEPTS OF CALCULUS I** 4 credits  
Prerequisite: 145 or 149 or placement. Functions; limits and continuity; differentiation and applications of differentiation; trigonometric, logarithmic, and exponential functions; integration and applications of integration; math of finance.
- 216 CONCEPTS OF CALCULUS II** 4 credits  
Prerequisite: 215. Trigonometric functions, calculus of trigonometric functions, integration techniques L'Hopital's Rule, improper integrals, multiple integrals, mathematical induction, difference equations, series.
- 221 ANALYTIC GEOMETRY-CALCULUS I** 4 credits  
Prerequisite: 149 or equivalent or placement. Analytic geometry, limits, continuity, derivatives, tangent and normal lines, extrema of functions, Rolle's theorem, mean value theorem, related rates, antiderivatives, definite integrals, areas, volumes, arc length.
- 222 ANALYTIC GEOMETRY-CALCULUS II** 4 credits  
Prerequisite: 221. Derivatives of exponential, logarithmic trigonometric, inverse trigonometric, hyperbolic and inverse hyperbolic functions; methods of integration, sequences, series; moments, centroids, indeterminate forms, polar coordinates.
- 223 ANALYTIC GEOMETRY-CALCULUS III** 4 credits  
Prerequisite: 222. Vector algebra, cylindrical, spherical coordinates, vector-valued functions, curvature; functions of several variables, limit, continuity, partial derivatives, differentials, directional derivatives, maxima and minima, multiple integrals, Divergence Theorem.
- 235 DIFFERENTIAL EQUATIONS** 3 credits  
Prerequisite: 223 or permission of instructor. Methods of forming and solving important types of differential equations. Analysis of models involving differential equations of first order and simple equations of second order.
- 289 SELECTED TOPICS IN MATHEMATICS** 1-3 credits  
Prerequisite: permission. Selected topics of interest in mathematics.
- 307 FUNDAMENTALS OF ADVANCED MATHEMATICS** 3 credits  
Prerequisite: 222. Logic, solving problems, and doing proofs in mathematics. Sets, extended set operations, and indexed family sets, induction. Binary relations. Functions, cardinality. Introductory concepts of algebra and analysis.
- 312 LINEAR ALGEBRA** 3 credits  
Prerequisite: 223 or permission of instructor. Study of vector spaces, linear transformations, matrices, determinants, inner products, the eigenvalue problem, quadratic forms and canonical forms.
- 335 INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS** 3 credits  
Prerequisite: 223 or equivalent. Basic techniques for solving ODEs, an introduction to theoretical topics including existence and uniqueness of solutions, linear systems, stability of solutions, and phase plane analysis.
- 401/501 HISTORY OF MATHEMATICS** 3 credits  
Prerequisite: 222. Origin and development of mathematical ideas. Course does not meet degree requirement in the department.
- 410/510 ADVANCED LINEAR ALGEBRA** 3 credits  
Prerequisite: 312. Study of vector spaces, linear transformation, canonical and quadratic forms, inner product spaces.
- 411/511 ABSTRACT ALGEBRA I** 3 credits  
Prerequisite: 307 or permission of instructor. Study of groups, rings, fields, integral domains.
- 412/512 ABSTRACT ALGEBRA II** 3 credits  
Prerequisite: 411/511 or permission of instructor. Study of groups, rings, fields, integral domains, vector spaces, field extensions, Galois theory.
- 413/513 THEORY OF NUMBERS** 3 credits  
Prerequisite: 222 or permission. Euclidean algorithm, unique factorization theorem, congruences, primitive roots, indices, quadratic residues, number-theoretic functions, Gaussian integers and continued fractions.
- 414/514 VECTOR ANALYSIS** 3 credits  
Prerequisite: 223. Vector algebra, calculus of scalar-vector, vector-scalar, vector-vector functions; integral theorems; orthogonal and general curvilinear. Application of geometry and engineering.
- 415/515 COMBINATORICS AND GRAPH THEORY** 3 credits  
Prerequisite: 222 or permission. Introduction to basic ideas and techniques of mathematical counting; properties of structure of systems.
- 421,2/521,2 ADVANCED CALCULUS I AND II** 3 credits each  
Sequential. Prerequisite: 223; 307 is highly recommended. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.
- 425/525 COMPLEX VARIABLES** 3 credits  
Prerequisite: 223. Complex variables; elementary functions, differentiation and analytic functions; integration and Cauchy's theorem; power series and Laurent series; residue theorem; applications such as conformal mappings, inversion of integral transform.
- 427/527 INTRODUCTION TO NUMERICAL ANALYSIS** 3 credits  
Prerequisites: 223 and either 3460:201 or knowledge of FORTRAN. Mathematical analysis of numerical methods for solving equations, interpolating function values, approximating derivatives and integrals, approximating functions.
- 428/528 NUMERICAL LINEAR ALGEBRA** 3 credits  
Prerequisites: 223 and 3460:201 or 330 or knowledge of FORTRAN. Mathematical analysis of numerical methods for solving systems of linear equations, eigenvalue problems, nonlinear systems, linear least square problems.

## MATHEMATICS

### 3450:

- 100 PREPARATORY MATHEMATICS** 3 credits  
Prerequisite: Placement. A review of high school algebra: real numbers, exponents and radicals, factoring, linear and quadratic equations, graphing, systems of equations, and problem solving. For students whose algebraic skills are not sufficient to allow them to enroll in University mathematical science courses. Does not meet General Studies mathematics requirement.
- 113 COMBINATORICS AND PROBABILITY** 1 credit  
Prerequisite: 100 or placement test. Permutations, combinations, sample spaces, events; simple, compound and conditional probability; Bernoulli trials, expectations and odds.
- 114 MATRICES** 1 credit  
Prerequisite: 100 or placement test. Nomenclature, operations, inverse, solution of  $m$  linear equations in  $n$  variables using elementary row operations.
- 115 LINEAR PROGRAMMING** 1 credit  
Prerequisite: 114 or equivalent. Minimizing and/or maximizing a linear function subject to a system of linear inequalities (geometrically and simplex method); introduction to game theory.
- 121 ANALYTIC GEOMETRY** 1 credit  
Prerequisite: 100 or placement test. Cartesian coordinate system; rational, logarithmic, exponential functions; sequences, series, limits, definition of series.
- 127 TRIGONOMETRY** 2 credits  
Prerequisite: Mathematics Placement Test. A standard right triangle approach to trigonometry, including trigonometric and inverse trigonometric functions and graphing, identities, equations, triangle solutions, complex numbers.
- 135 MATHEMATICS FOR LIBERAL ARTS** 3 credits  
Prerequisites: 100 or 2030:153 or placement test. Contemporary applications of mathematics for the non-science major to develop skills in logical thinking and reading technical material. Topics include voting, apportionment, scheduling, patterns, networks.
- 138 MATHEMATICS OF FINANCE** 1 credit  
Prerequisite: 100 or placement test. Simple and compound interest; bank discount, ordinary annuities (present value, amount and rate), amortization, annuities, perpetuities.
- 140 MATH FOR ELEMENTARY TEACHERS** 3 credits  
Prerequisites: 100 or placement test. Number systems and bases, measurement, selected topics from algebra, geometry, probability, number theory, graph theory, problem solving, combinatorics, and statistics. Enrollment limited to Elementary Education majors.
- 145 COLLEGE ALGEBRA** 4 credits  
Prerequisite: placement. Real numbers, equations and inequalities, linear and quadratic functions. Exponential and logarithmic functions. Systems of equations, matrices, determinants. Permutations and combinations.
- 149 PRECALCULUS MATHEMATICS** 4 credits  
Prerequisite: 145 or placement. Functions, polynomial functions, complex numbers, exponential and logarithmic functions, systems of equations, trigonometric functions, mathematical inductions, sequences, and binomial theorem.

## COMPUTER SCIENCE

### 3460:

- 429/529 NUMERICAL SOLUTIONS FOR ORDINARY DIFFERENTIAL EQUATIONS** 3 credits  
Prerequisite: 427/527. Mathematical analysis of numerical methods for solving ordinary differential equations. Runge-Kutta and linear multistep methods for initial value problems. Shooting, collocation and difference methods for boundary value problems.
- 430/530 NUMERICAL SOLUTIONS FOR PARTIAL DIFFERENTIAL EQUATIONS** 3 credits  
Prerequisite: 428/528 or equivalent. For advanced undergraduate and graduate students. The study of finite difference and finite element methods for partial differential equations consistency, stability, convergence and computer implementation.
- 431/531 SPECIAL FUNCTIONS AND OPERATIONAL CALCULUS** 3 credits  
Prerequisite: 235 or 335. Series solutions to differential equations; Bessel functions; orthogonal polynomials; self-adjoint boundary value problems and Fourier series; Laplace transforms; Fourier transforms.
- 432/532 PARTIAL DIFFERENTIAL EQUATIONS** 4 credits  
Prerequisite: 235 or 335. The classical initial value and boundary value problems of mathematical physics developed and solved using Fourier series and integral transforms.
- 435/535 SYSTEMS OF ORDINARY DIFFERENTIAL EQUATIONS** 3 credits  
Prerequisites: 235 or 335 and either 312 or 428 or permission. Analysis, solution of systems of equations, linear, nonlinear. Topics: stability theory, perturbation methods, asymptotic methods, applications from physical, social sciences.
- 436/536 MATHEMATICAL MODELS** 3 credits  
Prerequisite: 235 or 335, and a six-hour sequence in an approved applied area, or permission. Formulation and analysis of mathematical models in social and physical sciences. Analysis of deterministic and stochastic models. Topics may include stochastic processes, linear programming, graph theory, theory of measurement.
- 438/538 ADVANCED ENGINEERING MATHEMATICS I** 3 credits  
Prerequisites: 235 and 312 or permission. Sequential. Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables, special functions, Fourier series and transforms, PDEs.
- 439/539 ADVANCED ENGINEERING MATHEMATICS II** 3 credits  
Prerequisites: 235 and 312 or permission. Sequential. Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables, special functions, Fourier series and transforms, PDEs.
- 441/541 CONCEPTS IN GEOMETRY** 4 credits  
Prerequisite: 222 or permission of instructor; 307 is recommended. Axiomatic treatment of both Euclidean and non-Euclidean geometries. Other concepts included are finite geometry, transformations, constructions and inversions.
- 442/542 PROJECTIVE GEOMETRY** 3 credits  
Prerequisite: 222 or permission. Complex projective planes, duality, homogeneous coordinates, 1-1 correspondence, cross ratios, harmonic ranges, conics, quadrilaterals, quadrangles, applications to Euclidean geometry, quadric surfaces.
- 445/545 INTRODUCTION TO TOPOLOGY** 3 credits  
Prerequisite: 307 or permission of instructor. Introduction to topological spaces and topologies, mappings, cardinality, homeomorphisms, connected spaces, metric spaces.
- 489/589 TOPICS IN MATHEMATICS** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in mathematics and applied mathematics at an advanced level.
- 491/591 WORKSHOP IN MATHEMATICS** 1-3 credits  
(May be repeated) Group studies of special topics in mathematics and statistics. May not be used to meet undergraduate or graduate major requirements in mathematics and statistics. May be used for elective credit only.
- 497 INDIVIDUAL READING** 1-2 credits  
Prerequisites: senior standing and permission. Mathematics majors only. Directed studies designed as an introduction to research problems, under guidance of selected faculty member.
- 498 SENIOR HONORS PROJECT** 1-3 credits  
Prerequisite: 489 (honors). Directed study for senior student in the Honors Program who has completed 489 (honors). An introduction to research problems in mathematical sciences under the guidance of selected faculty.
- 125 DESCRIPTIVE COMPUTER SCIENCE** 2 credits  
Computer literacy; terminology; methods, media for data representation, storage; elements of a computing system; data organization.
- 126 INTRODUCTION TO BASIC PROGRAMMING** 3 credits  
Prerequisite: 3450:100 or placement. Introduction to elementary DOS commands and the syntax and semantics of Microsoft QuickBASIC. Includes basic control structures, subprograms, functions, arrays, and sequential files.
- 127 COMPUTERS IN TODAY'S WORLD** 3 credits  
Introduction to nature of computers and their capabilities. Special attention given to topics such as effects of computer on privacy, employment and education; ethics in computer community; potential for computer crime. Designed for non-majors.
- 201-8 INTRODUCTION TO PROGRAMMING LANGUAGES** 3 credits each  
Introduction to syntax and semantics of programming languages: assignment statement and arithmetic, control statements and loops, input/output, subprograms.
- 201 INTRODUCTION TO FORTRAN PROGRAMMING** 3 credits  
Prerequisites: 3450:145 or 149 or equivalent. Does not meet computer science major, minor and/or certificate requirements.
- 202 INTRODUCTION TO COBOL PROGRAMMING** 3 credits  
Prerequisites: 3450:145 or 149 or equivalent. Does not meet computer science major, minor and/or certificate requirements.
- 205 INTRODUCTION TO PASCAL PROGRAMMING** 3 credits  
Prerequisites: 3450:145 or 149 or equivalent. Does not meet computer science major, minor and/or certificate requirements.
- 206 INTRODUCTION TO C PROGRAMMING** 3 credits  
Prerequisites: programming experience and 3450:145 or 149. Provides the student with additional programming skills allowing access to assembly or high-level macros.
- 208 INTRODUCTION TO C++ PROGRAMMING** 3 credits  
Prerequisites: 206 or 330. Introduction to class types and data abstraction. In addition, memory management and dynamic memory allocation will be discussed.
- 209 INTRODUCTION TO COMPUTER SCIENCE** 4 credits  
Prerequisite: 3450:145, 149 or equivalent. An introduction to problem-solving methods and algorithm development. Programming in a high-level language including how to design, code, debug and document programs using techniques of good programming style.
- 210 DATA STRUCTURES AND ALGORITHMS I** 4 credits  
Prerequisites: 209 and 3450:208. Dynamic memory allocation methods, elementary data structures, internal representations, and associated algorithms. Topics include lists, stacks, queues, trees, and sorting methods.
- 289 SELECTED TOPICS IN COMPUTER SCIENCE** 1-3 credits  
Prerequisite: permission. Selected topics of interest in computer science.
- 302 PROGRAMMING APPLICATIONS WITH COBOL** 3 credits  
Prerequisite: 210. Applications of COBOL, JCL and file manipulation; intended to introduce business data processing techniques to the business option computer science major. Does not meet major requirements for mathematics option computer science students.
- 306 ASSEMBLY LANGUAGE PROGRAMMING** 3 credits  
Prerequisite: 210. Basic computer organization and data representation. Programming in assembly language on a typical digital computer Subroutine linkage and macro instructions.
- 307 APPLIED SYSTEMS PROGRAMMING** 3 credits  
Prerequisite: 306. Design and implementation of assemblers, linkers, loaders and macro processors. Introduction to compilers.
- 316 DATA STRUCTURES AND ALGORITHMS II** 3 credits  
Prerequisites: 210 and 3450:221 or 3450:215. A continuation of topics in 210. Topics include: graphs and graph algorithms, external sorting, hashing, advanced tree and file structures.
- 330 SURVEY OF PROGRAMMING LANGUAGES** 3 credits  
Prerequisite: 210 or programming experience in a high-level block-structured procedural programming language. An introduction to programming in C and LISP for experienced programmers. (Not to be used to satisfy minor or certificate requirements in the Department of Mathematical Sciences.)
- 408/506 INTRODUCTION TO C AND UNIX** 3 credits  
Prerequisite: programming experience. Syntax of C with flow structures, pointers, and command line concepts. For UNIX, shell scripts, UNIX file structure, system calls and inter-process communication protocols. (Not an approved mathematical sciences major, minor, or certificate elective.)
- 418/518 INTRODUCTION TO DISCRETE STRUCTURES** 3 credits  
Prerequisite: 210 or permission. Introduction to a number of structures in algebra of particular use to student in computer science. Topics include algorithms and flow chart language, graphs and digraphs, trees, lattices codes.
- 420/520 STRUCTURED PROGRAMMING** 3 credits  
Prerequisite: 316 and 418. Techniques of block programming using a structured programming language, program readability, program verification and program design.
- 426/526 OPERATING SYSTEMS** 3 credits  
Prerequisites: 307, 316 (and 330 or knowledge of C). Introduction to various types of operating systems: batch processing systems, multiprogramming systems and interacting processes: storage management; process and resource control; deadlock problem. Course is independent of any particular operating system.
- 428/528 UNIX SYSTEM PROGRAMMING** 3 credits  
Prerequisite: 426 (and 330 or knowledge of C). An overview of the UNIX operating system. Shell programming. Process management, processor management, storage management, scheduling algorithms, resource protection, and system programming.

- 430/530 THEORY OF PROGRAMMING LANGUAGES** 3 credits  
Prerequisite: 316 and 330. More advanced concepts underlying programming languages and their applications, formal definitions of programming languages, Backus Normal Form, semantics, compiler design.
- 435/535 ANALYSIS OF ALGORITHMS** 3 credits  
Prerequisites: 316 and 418. Design and analysis of efficient algorithms for random access machines; derivation of pattern classification algorithms.
- 440/540 COMPILER DESIGN** 3 credits  
Prerequisites: 307 and 316. Techniques used in writing and modifying compilers including translation, loading, execution, symbol tables and storage allocation; compilation of simple expressions and statements. Organization of a compiler for handling lexical scan, syntax scan, object code generation, error diagnostics and code optimization. Use of compiler writing languages and bootstrapping. The course requires a project involving compiler writing.
- 455/555 DATA COMMUNICATION AND COMPUTER NETWORKS** 3 credits  
Prerequisites: 210 (and 330 or knowledge of C). ISO-OSI, TCP/IP, SNA data switching, protocols, flow and error control, routing, topology, Network trends, network taxonomies, and socket-based programming.
- 457/557 COMPUTER GRAPHICS** 3 credits  
Prerequisite: 210 (and 330 or knowledge of C). Topics in vector graphics, scan line graphics, representations and languages for graphics.
- 460/560 ARTIFICIAL INTELLIGENCE AND HEURISTIC PROGRAMMING** 3 credits  
Prerequisite: 316 (and 330 or knowledge of LISP). Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers can display intelligence.
- 465/565 COMPUTER ORGANIZATION** 3 credits  
Prerequisite: 306. An introduction to the hardware organization of the computer at the register, processor and systems level. An in-depth study of the architecture of a particular computer systems family.
- 467/567 MICROPROCESSOR PROGRAMMING AND INTERFACING** 3 credits  
Prerequisites: 306, 316. Detailed study of a particular microprocessor architecture and instruction set. Standard device interface components. Real time programming concepts.
- 470/570 AUTOMATA, COMPUTABILITY AND FORMAL LANGUAGES** 3 credits  
Prerequisite: 418. Presentation of theory of formal languages and their relation to automata. Topics include description of languages; regular context-free and context-sensitive grammars; finite, pushdown and linear-bounded automata; turing machines; closure properties; computational complexity, stack automata and decidability.
- 475/575 DATABASE MANAGEMENT** 3 credits  
Prerequisite: 316 (and 330 or knowledge of C). Fundamentals of database organization, data manipulations and representation, data integrity, privacy.
- 489/589 TOPICS IN COMPUTER SCIENCE** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in computer science at an advanced level.
- 481/581 WORKSHOP IN COMPUTER SCIENCE** 1-3 credits  
Group studies of special topics in computer science. May not be used to meet graduate or undergraduate requirements in mathematics, statistics or computer science.
- 487/587 INDIVIDUAL READING IN COMPUTER SCIENCE** 1-3 credits  
(May be repeated) Prerequisite: permission. Computer science major only. Directed studies designed as introduction to research problems, under guidance of designated faculty member.
- 488 SENIOR HONORS PROJECT** 1-3 credits  
Prerequisite: 489 (honors). Directed study for senior student in the Honors Program who has completed 3480:489. An introduction to research problems in the mathematical sciences under the guidance of selected faculty.
- 262 INTRODUCTORY STATISTICS II** 2 credits  
Prerequisite: 261 or equivalent. Parametric and nonparametric methods of statistical inference for paired data and two-sample problems; one-way ANOVA, simple linear regression and correlation. Computer applications.
- 280 INTRODUCTION TO STATISTICAL COMPUTING** 2 credits  
Prerequisite: 260 or 262 or permission of the instructor. Introduction to statistical computing using statistical packages. Emphasis is on interpreting and using computer output of statistical problems involving descriptive statistics, hypothesis testing, regression, and analysis of variance.
- 289 SELECTED TOPICS IN STATISTICS** 1-3 credits  
Prerequisite: Permission. Selected topics of interest in statistics.
- 415/515 MATHEMATICAL CONCEPTS FOR STATISTICS** 4 credits  
Prerequisites: 3450:223, 3450:312, or equivalent. Topics from matrix algebra and analysis: quadratic forms, eigenvalues and roots, generalized inverses, vector functions, continuity, differentiation, extrema problems, multivariate integration, infinite series, and application. May not be used to meet graduate degree requirements for Mathematical Sciences majors.
- 450/550 PROBABILITY** 3 credits  
Prerequisite: 3450:221. Introduction to probability, random variables and probability distributions, expected value, sums of random variables, Markov processes.
- 451,2/551,2 THEORETICAL STATISTICS I AND II** 3 credits each  
Sequential. Prerequisite: 3450:223. Elementary combinatorial probability theory, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.
- 460/560 STATISTICAL METHODS** 4 credits  
Application of statistical methods to the social sciences including descriptive statistics, probability distributions, statistical inference (parametric, nonparametric), categorical data analysis, linear regression, correlation, computer applications. May not be used to meet Mathematical Sciences degree requirements.
- 461/561 APPLIED STATISTICS I** 4 credits  
Prerequisite: 3450:222 or 216 or equivalent. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, interval estimation, hypotheses testing (parametric and nonparametric), and simple linear regression and correlation.
- 462/562 APPLIED STATISTICS II** 4 credits  
Prerequisite: 461/561 or equivalent. Applications of the techniques of regression and multifactor analysis of variance.
- 465/565 DESIGN OF SAMPLE SURVEYS** 3 credits  
Prerequisite: 461/561 or equivalent. Design and analysis of frequently used sample survey techniques.
- 469/569 RELIABILITY MODELS** 3 credits  
Prerequisite: 461/561. Selected topics in reliability modeling including parametric and nonparametric models, competing modes of failure, censored data and accelerated life models.
- 471/571 ACTUARIAL SCIENCE I** 3 credits  
Prerequisite: 3450:216 or 222 or equivalent. Study of various statistical, financial, and mathematical calculations used to determine insurance premiums related to contingent risks based on individual risk model frameworks.
- 472/572 ACTUARIAL SCIENCE II** 3 credits  
Prerequisite: 471/571. Continuation of Actuarial Science I. Study of multiple life functions, multiple decrement models, valuation theory for pension plans, insurance models including expenses, nonforfeiture benefits and dividends.
- 475/575 FOUNDATIONS OF STATISTICAL QUALITY CONTROL** 3 credits  
Prerequisite: 461/561 or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.
- 480/580 STATISTICAL COMPUTER APPLICATIONS** 3 credits  
Prerequisites: 3450:222 and one semester course in statistics or permission. Translation of statistical operations into computer languages, iterative procedures, generating data, Monte Carlo techniques, use of statistical packages.
- 489/589 TOPICS IN STATISTICS** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Selected topics in advanced statistics, including quality control, reliability, sampling techniques, decision theory, advanced inference, stochastic processes and others.
- 491/591 WORKSHOP IN STATISTICS** 1-3 credits  
(May be repeated with change of topic) Group studies of special topics in statistics. May not be used to meet undergraduate or graduate major requirements in mathematics and statistics. May be used for elective credit only.
- 495/595 STATISTICAL CONSULTING** 1-3 credits  
Prerequisite: 480/580 or permission. Students will be assigned to work with an instructor on current projects in the Center for Statistical Consulting. May be repeated for a total of 4 credits; however, only 2 credits will count toward major requirements. Does not count for elective credit for Mathematical Sciences majors.
- 497 INDIVIDUAL READING** 1-2 credits  
(May be repeated for a total of four credits) Prerequisites: senior standing and permission. Directed studies in statistics designed as introduction to research problems under guidance of selected faculty member.
- 498 SENIOR HONORS PROJECT** 1-3 credits  
Prerequisite: 489 (honors). Directed study for senior student in the University Honors Program who has completed 3450:489 (honors). An introduction to research problems in the mathematical sciences under the guidance of selected faculty.

## STATISTICS

### 3470:

- 250 INTRODUCTORY PROBABILITY** 2 credits  
Prerequisite: 3450:145 or equivalent. Basic concepts of probability, random variables and their distributions, special discrete probability models, discrete event stochastic processes.
- 253-7 INTRODUCTION TO STATISTICS**  
Introduction to fundamental ideas of statistics at precalculus level including topics from the following:
- 253 HYPOTHESIS TESTING (PARAMETRIC)** 1 credit  
Prerequisite: 261.
- 255 REGRESSION AND CORRELATION** 1 credit  
Prerequisite: 253
- 256 EXPERIMENTAL DESIGN** 1 credit  
Prerequisite: 253.
- 257 TIME SERIES AND INDEX NUMBERS** 1 credit  
Prerequisite: 255.
- 260 BASIC STATISTICS** 3 credits  
Prerequisite: Mathematics Placement Test. Applied approach to data description and statistical inference (hypothesis testing, estimation). Analysis of ratios, rates, and proportions. Computer applications. Laboratory.
- 261 INTRODUCTORY STATISTICS I** 2 credits  
Prerequisite: Mathematics Placement Test. Descriptive statistics, tabular and graphical data displays; probability, probability distributions. Introduction to statistical inference (hypothesis testing, estimation); one-sample parametric and nonparametric methods. Computer applications.

## MODERN LANGUAGES

### 3500:

#### PLACEMENT PROCEDURES FOR NEW STUDENT

Student who has taken one year or less of a foreign language in high school should enroll in 101. Those who have taken more than one year of a foreign language in high school should take the placement test (Counseling and Testing, Simmons Hall 161). For placement in third-year courses or higher, department permission is required.

- 101.2 BEGINNING MODERN LANGUAGE I AND II** *4 credits each*  
(May be repeated for a different language) Sequential. Reading, speaking, writing and listening comprehension; intensive drill in pronunciation; short stories, outside reading and supplementary work in language laboratory.
- 201.2 INTERMEDIATE MODERN LANGUAGE I AND II** *3 credits each*  
(May be repeated for a different language) Sequential. Prerequisite: 102 or equivalent. Grammar review, practice in reading, writing, speaking and listening comprehension; short stories, plays, novels on intermediate level.
- 320 FRENCH CANADIAN LITERATURE IN TRANSLATION** *3 credits*  
Prerequisite: French major and minors only; 3520:306. Reading and discussion of English translations of French Canadian Literature. French majors and minors must read original French version and do all writing in French.
- 422 MODERN LANGUAGES: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** *1-4 credits*  
Prerequisite: Modern Languages 202 or equivalent. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
- 490/590 WORKSHOP** *2 credits*  
(May be repeated) Group studies of special topics in modern languages.
- 498 SENIOR HONORS PROJECT IN MODERN LANGUAGES** *1-3 credits*  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to language major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## FRENCH

### 3520:

- 101.2 BEGINNING FRENCH I AND II** *4 credits each*  
Sequential. Thorough study of sound system and basic structural patterns of French language, including oral practice and reading of simple prose. A placement test is required.
- 201.2 INTERMEDIATE FRENCH I AND II** *3 credits each*  
Sequential. Prerequisite: 102 or equivalent. Audio-oral sections. Practice in reading, writing, speaking and listening comprehension. Grammar review, short stories, plays and novels on intermediate level. A placement test is required.
- 207.8 INTERMEDIATE FRENCH I AND II READING OPTION** *3 credits each*  
Sequential. Prerequisite: 102 or equivalent. Reading and translation of texts dealing with contrasting French and American customs, values and attitudes.
- 301.2 FRENCH COMPOSITION AND CONVERSATION** *3 credits each*  
Sequential. Prerequisite: 202 or equivalent. Free composition, special attention to vocabulary and idioms, development of oral expression and conversational ability. Prerequisite for 302 is 301 or equivalent.
- 305.6 INTRODUCTION TO FRENCH LITERATURE** *3 credits each*  
Prerequisite: 202 or equivalent. Survey of French literature from its origins to present, with lectures, reading and class discussion of representative works.
- 309.10 FRENCH CULTURE AND CIVILIZATION** *3 credits each*  
Prerequisite: 202 or equivalent. Audio-visual presentation with class discussions of French cultural heritage from its origins to present. Conducted in French.
- 311 CONTEMPORARY FRENCH SOCIETY** *3 credits*  
Prerequisite: 202 or equivalent. A study of contemporary French society, including customs and political and social issues. Conducted in French. Counts toward Culture and Civilization requirement for major.
- 312 INDIVIDUAL SUMMER STUDY ABROAD** *2 credits*  
Prerequisites: 202 or equivalent and permission of instructor.
- 313 FRENCH CIVILIZATION AS SEEN IN THE MOVIES** *3 credits*  
Prerequisites: 302 (for majors). Study and discussion of various aspects of French culture and civilization as characterized in movies. Conducted in French (films, papers, and discussion). Prerequisite is 302 if course is to count toward French major. Non-majors may choose to write papers in English.
- 315 FRENCH PHONETICS** *3 credits*  
Prerequisite or corequisite: 202 or equivalent. Intensive drill in pronunciation with correction and improvement of student's accent, emphasis on articulation, intonation and rhythm.
- 350 THEMES IN FRENCH LITERATURE IN TRANSLATION** *3 credits*  
Prerequisite: 3400:210. (May not be taken for credit toward the French major) Readings, discussion of novels and plays relating to selected themes of French literature. Texts and discussion in English.
- 351 TRANSLATION: FRENCH** *3 credits*  
Prerequisite: 202 or equivalent. Study of translation techniques, both French to English and English to French. Emphasis on stylistics and interpretation of idioms.

- 352 TRANSLATION: BUSINESS FRENCH** *3 credits*  
Prerequisite: 351 or equivalent. Application of translation techniques with particular stress on business styles, formats, and vocabulary. Especially recommended for students interested in international business.
- 402/502 ADVANCED FRENCH GRAMMAR** *3 credits*  
Prerequisite: 302 or equivalent. Advanced study of normative French grammar with emphasis on syntax, morphology, grammatical structure and phonetic principles.
- 403.4 ADVANCED FRENCH COMPOSITION AND CONVERSATION** *3 credits each*  
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.
- 407/507 FRENCH LITERATURE OF THE MIDDLE AGES AND THE RENAISSANCE** *4 credits*  
Prerequisite: 305 or 306 or equivalent. Reading and discussion of selected Medieval and Renaissance literary works. Conducted in French.
- 411/511 17TH CENTURY FRENCH LITERATURE** *4 credits*  
Prerequisite: 305 or 306 or equivalent. Reading and discussion of selected works in poetry, drama and novels. Conducted in French.
- 415/515 18TH CENTURY FRENCH LITERATURE** *4 credits*  
Prerequisite: 305 or 306 or equivalent. Reading and discussion of selected authors: emphasis on the Philosophes. Conducted in French.
- 419/519 19TH CENTURY FRENCH LITERATURE** *4 credits*  
Prerequisite: 305 or 306 or equivalent. Reading and discussion of selected works pertaining to romantic, realistic and naturalistic movements. Conducted in French.
- 422 FRENCH: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** *1-4 credits*  
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
- 427/527 20TH CENTURY FRENCH LITERATURE** *4 credits*  
Prerequisite: 305 or 306 or equivalent. Reading and discussion of the most representative works of period. Conducted in French.
- 429/529 FRANCOPHONE CARIBBEAN LITERATURE** *3 credits*  
Prerequisites: 305 or 306 or equivalent. A study of selected literary works from Haiti, Guadeloupe, and Martinique in light of their geographic, historic, socioethnic, and cultural determinants.
- 450/550 EXPLICATION DE TEXTES** *3 credits*  
Prerequisite: 302 or equivalent. Study of traditional French method of literary analysis based on passages of representative authors from selected periods of French literary history.
- 460/560 SELECTED THEMES IN FRENCH LITERATURE** *3 credits*  
Prerequisite: 305 or 306 or equivalent. (May be repeated.) Conducted in French. Prerequisite: 302 and 306 or equivalents. Reading and discussion of literary works selected according to an important theme.
- 471/571 FRENCH LANGUAGE READING PROFICIENCY** *4 credits*  
Designed to develop proficiency in reading comprehension. Prepares students for graduate reading examination. Does not count toward French major.
- 497.8 INDIVIDUAL READING IN FRENCH** *1-3 credits each*  
Prerequisite: 302 and permission of French section.

## GERMAN

### 3530:

- 101.2 BEGINNING GERMAN I AND II** *4 credits each*  
Sequential. Reading, speaking, writing and listening comprehension; intensive drill in pronunciation; short stories, outside reading and supplementary work in language laboratory.
- 201.2 INTERMEDIATE GERMAN I AND II** *3 credits each*  
Sequential. Prerequisite: 102 or equivalent. Grammar review, reading, writing, speaking, listening comprehension; short stories, plays, novels on intermediate level; outside reading and supplementary work in language laboratory.
- 207.8 INTERMEDIATE GERMAN I AND II READING OPTIONS** *3 credits each*  
Sequential. Prerequisites: 102 or equivalent and permission. Reading of German texts in culture and civilization, discussion in English, translation and grammatical analysis. Not open to majors.
- 250 20TH CENTURY GERMAN LITERATURE IN TRANSLATION** *2 credits*  
Reading and discussion of works of Mann, Rilke, Hesse, Kafka, Benn, Brecht, Frisch, Durrenmatt, Borchert and Grass. May not be taken for credit toward the major in German.
- 251 19TH CENTURY GERMAN LITERATURE IN TRANSLATION** *2 credits*  
Reading and discussion of works in Kleist, Heine, Hebbel, Keller, Storm, Meyer and Hauptmann. May not be taken for credit toward the German major.
- 252 AGE OF GOETHE IN TRANSLATION** *2 credits*  
Reading and discussion of representative drama, prose and poetry of Lessing, Goethe and Schiller. May not be taken for credit toward the German major.
- 301.2 GERMAN CONVERSATION AND COMPOSITION** *3 credits each*  
Prerequisite: 202 or equivalent. Advanced composition using German models, special attention to words and idioms, development of oral expression and conversational ability.
- 305.6 INTRODUCTION TO GERMAN LITERATURE** *3 credits each*  
Prerequisite: 202 or equivalent. Introduction to study of German literature. Reading and class discussion of representative works. Conducted in German.
- 351.2 TRANSLATION: GERMAN** *3 credits each*

- 403.4 ADVANCED GERMAN CONVERSATION AND COMPOSITION** 3 credits each  
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.
- 406.7 GERMAN CULTURE AND CIVILIZATION** 3 credits each  
Prerequisite: 302 or 306 or equivalent. Particular emphasis on customs, traditions, literary trends and artistic tendencies that constitute German's contribution to Western civilization.
- 419/519 THE AGE OF GOETHE I** 3 credits  
Prerequisite: 302 or 306 or permission. Enlightenment and generation of Sturm und Drang, including works of Wieland, Lessing, Klopstock, Herder, the young Goethe and others. Conducted in German.
- 420/520 THE AGE OF GOETHE II** 3 credits  
Prerequisites: 302, 306 or permission. Faust, selections from parts I and II. Ballads of Goethe and Schiller. Conducted in German.
- 422 GERMAN: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
- 431/531 200 YEARS OF GERMAN DRAMA** 3 credits  
Prerequisite: 302 or 306 or permission. Representative works of major classical dramatics including Lessing, Goethe, Schiller, Kleist, Grillparzer. Conducted in German.
- 432/532 200 YEARS OF GERMAN DRAMA** 3 credits  
Prerequisite: 302 or 306 or permission. Representative works of the major dramatists, Buchner, Hebbel, Hauptmann and Wedekind. Conducted in German.
- 435/535 GERMAN SHORT STORY** 3 credits  
Prerequisite: 302 or 306 or permission. Reading and discussion of representative works of German romanticism, including those of Teck, Kleist, E. T. A. Hoffman, Brentano, Eichendorff. Conducted in German.
- 436/536 GERMAN SHORT STORY** 3 credits  
Prerequisite: 302 or 306 or permission. Reading and discussion of works representative of the period, including those of Droste-Hulshoff, Stifter, Keller, Meyer, Storm. Conducted in German.
- 439/539 20TH CENTURY LITERATURE I** 3 credits  
Prerequisite: 302 or 306 or permission. Clash of the old and the new at the turn of the century. Works of T. Mann, Hauptmann, Kaiser, Hofmannsthal, Rilke, Wedekind and others. Conducted in German.
- 440/540 20TH CENTURY GERMAN LITERATURE II** 3 credits  
Prerequisite: 302 or 306 or permission. Impact of modernity. Reading and discussion of writings of Hesse, Kafka, Doblin, Werfel and others. Conducted in German.
- 471/571 GERMAN LANGUAGE READING PROFICIENCY** 4 credits  
Designed to develop proficiency in reading comprehension.
- 497.8 INDIVIDUAL READING IN GERMAN** 1-3 credits each  
Prerequisite: permission.

## ITALIAN

### 3550:

- 101.2 BEGINNING ITALIAN I AND II** 4 credits each  
Sequential. Reading, speaking, writing and listening comprehension; intensive drill in pronunciation; short stories, outside reading and supplementary work in language laboratory.
- 201.2 INTERMEDIATE ITALIAN I AND II** 3 credits each  
Sequential. Prerequisite: 102 or equivalent. Grammar review, practice in reading, writing, speaking and listening comprehension; short stories, plays, novels on intermediate level; outside reading and supplementary work in language laboratory.
- 207.8 INTERMEDIATE ITALIAN I AND II READING OPTION** 3 credits each  
Sequential. Prerequisite: 102 or equivalent. Readings cover various aspects of Italian culture through the centuries, with particular emphasis on history, literature, art and contemporary Italian way of life as compared with American one.
- 250 GENIUS OF ITALIAN LITERATURE IN TRANSLATION** 2 credits  
Reading and discussion of works of Dante, Petrarca, Boccaccio, Ariosto, Machiavelli, Cellini, Tasso, Bruno and Pirandello De Filippo.
- 301.2 ITALIAN COMPOSITION AND CONVERSATION** 3 credits each  
Prerequisite: 202 or equivalent. Italian composition using Italian models, special attention to words and idioms and development of oral expression and conversational ability.
- 306.8 INTRODUCTION TO LITERATURE** 3 credits each  
Prerequisite: 202 or equivalent. Introduction to study of Italian literature. Reading and class discussion in Italian of representative works.
- 422 ITALIAN: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
- 497 INDIVIDUAL READING IN ITALIAN** 1-3 credits  
Prerequisite: permission.

## RUSSIAN

### 3570:

- 101.2 BEGINNING RUSSIAN I AND II** 4 credits each  
Reading, speaking, writing, and understanding; intensive drill in pronunciation and supplementary work in language laboratory.
- 201.2 INTERMEDIATE RUSSIAN I AND II** 3 credits each  
Prerequisite: 102 or equivalent. Grammar review, practice in reading, writing, speaking; short stories, novels on intermediate level; outside reading and supplementary work in language laboratory.
- 207.8 INTERMEDIATE RUSSIAN I AND II READING OPTION** 3 credits each  
Sequential. Prerequisite: 102 or equivalent. Reading of texts in Russian dealing with culture of Russian-speaking people. Discussion of content of these texts in English along with review of grammar to extent necessary for accurate understanding of texts. Not open to majors.
- 301.2 RUSSIAN COMPOSITION AND CONVERSATION** 3 credits each  
Prerequisite: 202 or equivalent. Advanced composition using Russian models, special attention to words and idioms; development of oral expression and conversational ability.
- 306.8 INTRODUCTION TO RUSSIAN LITERATURE** 3 credits each  
Prerequisite: 202 or equivalent. Reading and class discussion in Russian of representative works.
- 309.10 RUSSIAN CIVILIZATION AND CULTURE** 3 credits each  
Prerequisite: 202 or equivalent. Reading and discussion of Russian texts relating to developments in Russian civilization and culture.
- 351.2 TRANSLATION: RUSSIAN** 3 credits each
- 403.4 ADVANCED RUSSIAN COMPOSITION AND CONVERSATION** 3 credits each  
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.
- 411.2 SCIENTIFIC RUSSIAN** 3 credits each  
Prerequisite: 202 or equivalent. Intensive reading of scientific articles in chemistry, physics, mathematics, biology and medicine.
- 420.1 RUSSIAN LITERATURE OF THE 19TH CENTURY: ROMANTICISM AND REALISM** 3 credits each  
Prerequisites: 301 or 302 or permission. Readings from representative authors such as Pushkin, Lermontov, Gogol, Turgenev, Dostoyevsky, Tolstoy, Goncharov and others.
- 422 RUSSIAN: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
- 427.8 RUSSIAN LITERATURE OF THE 20TH CENTURY** 3 credits each  
Prerequisite: 301 or 302 or permission. Reading and discussion of selected literary works from Gorky to Solzhenitsyn.
- 439 ADVANCED RUSSIAN SYNTAX, GRAMMAR AND CONVERSATION** 3 credits  
Prerequisite: 404 or equivalent. Advanced work in composition, translation into Russian and idiomatic use of the spoken language.
- 497.8 INDIVIDUAL READING IN RUSSIAN** 1-3 credits each  
Prerequisite: permission.

## SPANISH

### 3580:

- 101.2 BEGINNING SPANISH I AND II** 4 credits each  
Sequential. Reading, speaking, writing and listening comprehension; intensive drill in pronunciation; short stories, outside reading and supplementary work in language laboratory.
- 201.2 INTERMEDIATE SPANISH I AND II** 3 credits each  
Sequential. Prerequisite: 102 or equivalent. Grammar review, practice in reading, writing, speaking and listening comprehension; short stories, plays novels on intermediate level; outside reading and supplementary work in language laboratory.
- 207.8 INTERMEDIATE SPANISH I AND II READING OPTION** 3 credits each  
Sequential. Prerequisites: 102 or equivalent and permission. Reading of texts in Spanish dealing with culture of Spanish-speaking people. Not open to majors.
- 301.2 SPANISH COMPOSITION AND CONVERSATION** 3 credits each  
Prerequisite: 202 or equivalent. Advanced composition using Spanish models, special attention to words and idioms, development of oral expression and conversational ability.
- 311 SPANISH/SPANISH-AMERICAN CULTURAL EXPERIENCE** 1-2 credits  
Prerequisite: permission. Student's residence and/or independent study in Spanish-speaking country which results in demonstrable assimilation of country's culture may earn a maximum of two credits.
- 350 THE LITERATURE OF SPANISH-AMERICA IN TRANSLATION** 3 credits  
Prerequisites: 3400.210. (May not be taken for credit toward the Spanish major.) Reading, discussion of novels, short stories of major Spanish-American. Texts and discussion in English.
- 351.2 TRANSLATION: SPANISH** 3 credits each
- 401.2 ADVANCED COMPOSITION AND CONVERSATION** 3 credits each  
Prerequisites: 302 or equivalent. Development of proficiency in speaking and writing Spanish at a level beyond that achieved in 301.2. Conducted in Spanish.
- 403 ADVANCED GRAMMAR** 3 credits  
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

- 405/506 SPANISH LINGUISTICS: PHONOLOGY** 4 credits  
Prerequisite: permission. Descriptive study of Spanish phonetics and morphology, comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.
- 406/506 SPANISH LINGUISTICS: SYNTAX** 4 credits  
Prerequisite: permission. Descriptive study of Spanish syntax; introduction to theories of grammar; overview of Spanish semantics and pragmatics. Conducted in Spanish.
- 407 INTRODUCTION TO HISPANIC LITERATURE: SPAIN** 4 credits  
Prerequisites: 302 or equivalent. Reading and discussion of modern Spanish literature including drama, poetry, essay and fiction. Introduction to the fundamentals of literary criticism and literary movements. Conducted in Spanish.
- 408 INTRODUCTION TO HISPANIC LITERATURE: SPANISH AMERICAN** 4 credits  
Prerequisites: 302 or equivalent. Reading and discussion of modern Spanish American drama, poetry, essay and fiction. Introduction to literary movements in Spanish American literature. Conducted in Spanish.
- 409/509 MEDIEVAL AND RENAISSANCE SPANISH LITERATURE** 4 credits  
Prerequisite: 407 or 408 or permission. Reading and discussion of representative works that mark beginnings of Spanish literature in poetry, prose and drama, with emphasis given to the major works: *Cantar de Mio Cid*, *El Libro de Buen Amor*, *La Celestina* and the ballads. Conducted in Spanish.
- 411/511 SPANISH LITERATURE OF THE GOLDEN AGE** 4 credits  
Prerequisite: 407 or 408 or permission. Reading and discussion of representative novels and short stories with special emphasis on works of Miguel de Cervantes. Drama, poetry and essays of 16th and 17th Centuries studied. Conducted in Spanish.
- 412/512 CERVANTES: DON QUIJOTE** 4 credits  
Prerequisite: 407 or 408 or permission of the Instructor. Reading and analysis of *Don Quijote* as the first modern novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.
- 415/515 18TH AND 19TH CENTURY SPANISH DRAMA AND POETRY** 4 credits  
Prerequisite: 407 or 408 or permission. Reading, discussion and lectures. Study of Neoclassicismo and Romanticismo. Conducted in Spanish.
- 416/516 19TH CENTURY SPANISH PROSE** 4 credits  
Prerequisite: 407 or 408 or permission. Reading, discussion and lectures. Study of Realismo, Naturalismo and *La Generacion del 98*. Conducted in Spanish.
- 418/518 20TH CENTURY SPANISH PROSE** 4 credits  
Prerequisite: 407 or 408 or permission of the instructor. Reading and analysis of representative writers of prose fiction with a selection of works that illustrates major developments and themes. Conducted in Spanish.
- 419/519 20TH CENTURY SPANISH DRAMA/POETRY** 4 credits  
Prerequisite: 407 or 408 or permission. Reading and analysis of representative writers of drama and poetry with a selection of works that illustrates the major developments and themes in both genres. Conducted in Spanish.
- 422/522 SPECIAL TOPICS IN SPECIALIZED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
- 423/523 SPANISH-AMERICAN LITERATURE BEFORE 1900** 4 credits  
Prerequisite: 407 or 408 or permission. Reading of representative Spanish-American literature from the discovery to 1900. Oral and written reports. Conducted in Spanish.
- 424/524 20TH CENTURY SPANISH-AMERICAN LITERATURE** 4 credits  
Prerequisite: 407 or 408 or permission. Reading and analysis of selected dramas, essays, poems and short fiction written by outstanding Spanish-American authors of this century. Conducted in Spanish.
- 425/525 20TH CENTURY SPANISH-AMERICAN NOVEL** 4 credits  
Prerequisite: 407 or 408 or permission. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.
- 427, 8/527, 8 SPANISH AND SPANISH-AMERICAN CULTURE AND CIVILIZATION** 4 credits each  
Prerequisite: 302 or permission. Emphasis on customs, traditions, literary trends and artistic tendencies that constitute Spain's specific contribution to Western civilization. Study of Spanish-speaking world. Conducted in Spanish.
- 429/529 CULTURE AND LITERATURE OF THE HISPANIC CARIBBEAN** 4 credits  
Prerequisite: 302 or permission. Emphasis on customs, traditions, and literature, including lectures, films, slides, and analysis of selected writings by contemporary Hispanic authors from the Caribbean. Conducted in Spanish.
- 430/530 WOMEN IN 20TH CENTURY HISPANIC LITERATURE** 4 credits  
Prerequisite: 407 or 408 or permission. Reading and analysis of selected works from the 20th Century that depict women in Hispanic countries. Methodologies of feminist criticism will be studied. Conducted in Spanish.
- 471/571 SPANISH LANGUAGE READING PROFICIENCY** 4 credits  
Designed to develop proficiency in reading comprehension.
- 497 INDIVIDUAL READING IN SPANISH** 1-3 credits  
Prerequisite: permission.

## PHILOSOPHY

### 3600:

- 101 INTRODUCTION TO PHILOSOPHY** 3 credits  
Introduction to philosophic problems and attitudes through acquaintance with thoughts on some leading thinkers of Western tradition.
- 120 INTRODUCTION TO ETHICS** 3 credits  
Introduction to problems of moral conduct through readings from the tradition and class discussions; nature of "good," "right," "ought" and "freedom."
- 125 THEORY AND EVIDENCE** 3 credits  
An investigation of the concept of evidence and the criteria for the evaluation of theories in various areas of study including the natural sciences, the social sciences and philosophy. The role of scientific information in the formation and justification of value judgments.
- 170 INTRODUCTION TO LOGIC** 3 credits  
Introduction to logic and critical thinking. Includes such topics as meaning, informal fallacies, propositional logic, predicate and syllogistic logic and nature of induction.
- 211 HISTORY OF ANCIENT PHILOSOPHY** 3 credits  
History and development of ancient Greek philosophy from pre-Socrates to Aristotle. Readings of primary sources in translation.
- 216 AMERICAN PHILOSOPHY** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. Movement of ideas in American from Royce to present.
- 232 PHILOSOPHY OF RELIGION** 3 credits  
Prerequisite: one philosophy course. Discussion, analysis of problems of theology, nature of religious experience; God's nature, existence; immortality, sin, faith, reason; holy revelation, redemption.
- 280 SOPHOMORE TOPICS IN PHILOSOPHY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in philosophy at the sophomore level.
- 312 HISTORY OF MEDIEVAL PHILOSOPHY** 3 credits  
History of Western philosophy from end of Roman Empire to Renaissance. Major philosophers studied include St. Augustine, St. Anselm, Peter Abelard, St. Thomas Aquinas, Duns Scotus and William of Ockham. Readings from primary sources.
- 313 HISTORY OF MODERN PHILOSOPHY** 3 credits  
Analysis of major philosophical issues of 17th and 18th Centuries from Descartes through Kant. Readings of primary sources in translation.
- 314 19TH CENTURY PHILOSOPHY** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. Inquiry into philosophically significant ideas of Hegel, Marx, Schopenhauer, Mill, Kierkegaard and Nietzsche.
- 323 ADVANCED TOPICS IN ETHICS** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. An examination of selected topics in Ethical Theory such as the Naturalistic Fallacy, Ethical Non-Cognitivism, Prescriptivism, Theories of Rights, Theories of Punishment, Nihilism, Relativism, Moral Skepticism. Specific topics will be announced in the course schedule.
- 324 SOCIAL AND POLITICAL PHILOSOPHY** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. An examination of the normative justification of social, political institutions and practices. Analyses concepts such as rights, justice, equality, political obligation from historical as well as contemporary points of view. Application to particular social issues covered.
- 332 DIALECTICAL MATERIALISM** 3 credits  
Prerequisite: 324 or permission of instructor. Includes Hegelian and other origins as well as its development in writings of Marx, Engels, Lenin and contemporary writers. Focus on metaphysics, social philosophy, philosophy of history, human nature, ethics, aesthetics.
- 350 PHILOSOPHY OF ART** 3 credits  
Prerequisite: One course in philosophy or permission of instructor. An examination of theories of the nature of art and the grounds of aesthetic evaluation. Analysis of such concepts as representation, form, content, expression, institution, convention, meaning, truth as they apply in the context of the arts.
- 361 BIOMEDICAL ETHICS** 3 credits  
Prerequisites: 101, 120 or 170; or permission of instructor. The identification, analysis and evaluation of ethical issues arising most critically in the biomedical setting, e.g., abortion, termination of treatment, definition of death, IVF, AIDS.
- 362 BUSINESS ETHICS** 3 credits  
Prerequisites: 101, 120 or 170; or permission of instructor. Basic moral theories, moral principles and the decision-making process, applied to issues in business.
- 363 POLICE ETHICS** 3 credits  
Prerequisites: 101, 120 or 170; or permission of instructor. Basic moral concepts and their application to the criminal justice system. Concerned with such issues as punishment, the use of force and conflict resolution.
- 371 PHILOSOPHY OF MIND** 3 credits  
Nature of mind and the relationship between mind and body. Specific topics such as the limits of human reason, personal identity, the role of human thought in action and whether machines can think are also considered.
- 374 SYMBOLIC LOGIC** 3 credits  
Prerequisite: 170 or permission of instructor. Detailed consideration of propositional and first-order predicate logic. Introduction to class logic, modal logics and axiomatics.
- 380 JUNIOR TOPICS IN PHILOSOPHY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in philosophy at the junior level.

- 390 JUNIOR HONORS COLLOQUIUM** 3 credits  
Prerequisite: junior standing in Honors Program or junior honors standing as philosophy major or permission of instructor or nomination by department faculty member. Selected readings, research, writing and defense of one or more philosophical projects. Preparation and foundation for senior honors project in philosophy.
- 411/511 LATER DIALOGUES OF PLATO** 3 credits  
Prerequisites: one introductory course and 211 or permission of instructor. Readings of dialogues in translation, commencing with Theaetetus including: Parmenides, Sophist, Statesman, Philebus.
- 418/518 ANALYTIC PHILOSOPHY** 3 credits  
Prerequisites: 211, 312 and 313 or permission of instructor. Study of ideal and ordinary language movements in 20th Century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austen.
- 419/519 BRITISH EMPIRICISM** 3 credits  
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Locke, Berkeley and Hume.
- 421/521 PHILOSOPHY OF LAW** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. Philosophical inquiry into the nature of law and legal institutions.
- 422/522 CONTINENTAL RATIONALISM** 3 credits  
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Descartes, Spinoza and Leibniz.
- 424/524 EXISTENTIALISM** 3 credits  
Prerequisites: one introductory course in philosophy, 314 or permission of instructor. In-depth inquiry into the thought of Kierkegaard, Jaspers, Heidegger, Sartre, Tillich and other existentialists with their concern for the human condition.
- 428/528 PHENOMENOLOGY** 3 credits  
Prerequisites: one introductory course, 314 or permission of instructor. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.
- 432/532 ARISTOTLE** 3 credits  
Prerequisites: 211, 312 and 313 or permission of instructor. Detailed study of Aristotle's metaphysics, philosophy of nature, philosophy of mankind and ethics.
- 434/534 KANT** 3 credits  
Prerequisite: 313 or permission of instructor. Study of Kantian system of thought and its relation to history of philosophy. Includes thorough investigation of one or more of Kant's philosophic works.
- 444/544 PROBLEMS IN PHILOSOPHY** 3 credits  
Prerequisites: two courses in philosophy or permission of instructor. Thorough, critical examination of one major philosophical problem.
- 462/562 THEORY OF KNOWLEDGE** 3 credits  
Prerequisites: three courses in philosophy. Examination of nature of knowledge; theories of perception, conception and truth, problem of induction and relation of language to knowledge.
- 464/564 PHILOSOPHY OF SCIENCE** 3 credits  
Prerequisites: 101, 170 or permission of instructor. Nature of scientific inquiry, types of explanation, laws and causality, theoretical concepts and reality. Also considers critics of hypothetical-deductive view of science, e.g., Hanson and Kuhn.
- 471/571 METAPHYSICS** 3 credits  
Prerequisites: 211, 312 and 313 or permission of instructor. Theories about ultimate nature and ultimate explanation of reality. Uses readings from classical and contemporary sources.
- 480/580 SEMINAR** 3 credits  
(May be repeated) Prerequisite: permission of instructor.
- 481/581 PHILOSOPHY OF LANGUAGE** 3 credits  
Prerequisites: 101 and 170 or permission of instructor. Contemporary philosophies about nature of language and its relation to reality and human thinking. Includes discussion of views of linguists such as Chomsky.
- 490 SENIOR HONORS PROJECT IN PHILOSOPHY** 1-6 credits  
(May be repeated for a total of six credits) Prerequisite: 390 or senior standing in Honors Program or senior honors standing as philosophy major or permission of instructor or nomination by department faculty member. Research leading to completion of senior honors thesis involving original work under faculty supervision.
- 497/597 INDIVIDUAL STUDY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: completion of required courses of philosophy major or permission of instructor and department head. Directed independent study of philosopher, philosophy or philosophical problem under guidance of selected faculty member. Subject matter determined by selected faculty member in consultation with student. Graduate credit requires significant additional work which may include additional research paper.
- 160 PHYSICS IN SPORTS** 3 credits  
An introduction to physics, particularly mechanics. Athletic activities utilized to illustrate principles.
- 261 PHYSICS FOR THE LIFE SCIENCES I** 4 credits  
Prerequisites: high school algebra, trigonometry or 3450:149 as corequisite or permission. Introductory course for professional work in biology and health professions and services. Emphasizes life science applications. Mechanics: laws of motion, force, torque, work, energy, power; properties of matter: gases, liquids, solids, fluid mechanics.
- 262 PHYSICS FOR THE LIFE SCIENCES II** 4 credits  
Prerequisite: 261. Laws of thermodynamics, kinetic theory. Wave phenomena: sound, light, optics; electricity and magnetism; atomic and nuclear physics; radioactivity.
- 267,8 LIFE SCIENCE PHYSICS COMPUTATIONS I AND II** 1 credit each  
Corequisites: 261 (with 267); 262 (with 268). Optional companion courses to 261,2 provides additional computational experience in applications of physics to life sciences, emphasizing use of algebra and trigonometry. Particularly recommended for student with modest mathematical preparation.
- 291 ELEMENTARY CLASSICAL PHYSICS I** 4 credits  
Corequisite: 3450:221. Introductory physics for student of science and engineering. Classical statics, kinematics and dynamics, as related to contemporary physics. Oscillations, waves; fluid mechanics. Vectors and some calculus introduced as needed.
- 292 ELEMENTARY CLASSICAL PHYSICS II** 4 credits  
Prerequisite: 291. Thermodynamics from atomic point of view; basic laws of electromagnetism; mechanical and electromagnetic waves. Interference and diffraction; coherence; geometrical and physical optics.
- 293,4 PHYSICS COMPUTATIONS I AND II** 1 credit each  
Corequisite: 291 (with 293); 292 (with 294). Optional companion courses to 291,2 provides experience in problem solving, and elaborates application of calculus to simple physical phenomena. Particularly recommended for a freshman and for student with modest preparation in mathematics or physical sciences.
- 301 ELEMENTARY MODERN PHYSICS** 3 credits  
Prerequisite: 292 or permission of instructor. Special relativity, introduction to quantum physics, hydrogen atom and complex atoms, atomic spectra, topics in nuclear and solid-state physics.
- 310 ELECTRONICS** 3 credits  
Prerequisite: 262 or 292. AC and DC circuit theory, digital integrated logic circuits, counters, digital waveshaping, A to D and D to A conversion and applications.
- 320 OPTICS** 3 credits  
Prerequisites: 262 or 292 and 3450:223. Geometric optics: reflection, mirrors, refraction, lenses, optical instruments. Physical optics: waves, superposition, coherence, lasers, interference, diffraction, absorption and scattering, dispersion, double refraction, polarization, optical activity.
- 322,23 INTERMEDIATE LABORATORY I AND II** 2 credits each  
Prerequisite: 292 or 292. Laboratory course stressing measurement techniques with contemporary laboratory apparatus. Experiment design, instrument calibration and reporting emphasized. Modern physics experiments and measurement of fundamental natural constants.
- 331,2 ASTROPHYSICS I AND II** 3 credits each  
Prerequisite: 262 or 292. One-year comprehensive, qualitative course recommended for student majoring in physics or natural science, and for secondary school teachers and others desiring comprehensive survey of astronomy and astrophysics at intermediate level.
- 340 THERMAL PHYSICS** 3 credits  
Prerequisite: 262 or 292. Basic principles of thermal and statistical physics. Ensembles, laws of thermodynamics, equilibrium, irreversibility, equipartition theorem, canonical distribution, Maxwell distribution, phase changes, cyclic processes, transport processes.
- 350 COMPUTATIONAL PHYSICS** 3 credits  
Prerequisites: 292, or 262 and 3450:221; and 3460:201, 3460:210, or 4100:206. Numerical techniques for computer solutions to physics problems, including mechanics, gravitation, electricity and magnetism, and modern physics.
- 399 UNDERGRADUATE RESEARCH** 1-6 credits  
(May be repeated) Prerequisite: permission of instructor. Participation in current research project in department under supervision of faculty member.
- 400/500 HISTORY OF PHYSICS** 3 credits  
Prerequisite: 262 or 292. Study of origin and evolution of major principles and concepts characterizing contemporary physics.
- 406/506 WAVES** 3 credits  
Prerequisite: 262 or 292. Analysis of phenomena common to all waves, including free oscillations, forced oscillations, traveling waves, reflection, polarization, interference and diffraction. Water, sound, electromagnetic, seismic and deBroglie waves examined.
- 431/531 MECHANICS I** 3 credits  
Prerequisites: 292 and 3450:235. Mechanics at intermediate level. Newtonian mechanics, motion of a particle in one dimension, central field problem, system of particles, conservation laws, rigid bodies, gravitation.
- 432/532 MECHANICS II** 3 credits  
Prerequisite: 431/531. Advanced mechanics at the senior or beginning graduate level, moving coordinate systems, mechanics of continuous media, Lagrange's equations, tensor algebra and stress analysis, rotation of rigid bodies, vibration theory.
- 436/536 ELECTROMAGNETISM I** 3 credits  
Prerequisites: 292, 3450:235 or permission of instructor. Electricity and magnetism at intermediate level. Electrostatics and magnetostatics, electric field, scalar potential, dielectrics, Laplace's and Poisson's equations, currents, magnetic field, vector potential, magnetic materials, inductance.
- 437/537 ELECTROMAGNETISM II** 3 credits  
Prerequisite: 436/536. Special relativity, four vectors, Maxwell's equations in covariant form; propagation, reflection and refraction of electromagnetic waves; multipole radiation.

## PHYSICS

### 3650:

- 130 DESCRIPTIVE ASTRONOMY** 4 credits  
Qualitative introduction to astronomy, intended primarily as a first science course for non-science majors. Includes laboratory and observational activities.
- 133 MUSIC, SOUND AND PHYSICS** 4 credits  
Qualitative introduction to the physics of sound, its properties, perception and reproduction, including acoustical principles of musical instruments. Laboratory and observational activities included.
- 137 LIGHT** 4 credits  
Introductory, qualitative course dealing with the nature of light and the interaction of light with various materials to produce common visual effects. Laboratory activities included that provide experience in scientific investigation.

- 441/541 QUANTUM PHYSICS I** 3 credits  
Prerequisites: 301 and 3450:235. Introduction to quantum theory, Schrodinger equation, physical observables, one-dimensional systems, angular momentum, perturbation theory, the variational principle, scattering theory, emission and absorption, identical particles, and the Pauli Principle.
- 442/542 QUANTUM PHYSICS II** 3 credits  
Prerequisite: 441/541. Applications of quantum mechanics to atomic, nuclear and solid state physics. Tunneling and alpha decay, periodic potential, Hydrogen and Helium atoms, interatomic forces, quantum statistics.
- 451,2/551,2 ADVANCED LABORATORY I AND II** 2 credits each  
Prerequisite: 323 or permission of instructor. Applications of electronic, solid-state devices, techniques to research-type projects in contemporary physics. Introduction to resonance techniques; nuclear magnetic resonance, electron spin resonance, nuclear quadrupole resonance. Scintillation spectroscopy. Alpha- and beta-ray spectroscopy.
- 468/568 DIGITAL DATA ACQUISITION** 3 credits  
Prerequisite: 262 or 292. Designed to introduce science and mathematics students to use of digital techniques of interfacing instruments to microcomputers. Physical measurements and device control are emphasized.
- 470/570 INTRODUCTION TO SOLID-STATE PHYSICS** 3 credits  
Prerequisite: 441 or permission of instructor. Account of basic physical processes occurring in solids, with emphasis on fundamental relation between these processes and periodicity of crystalline lattice.
- 471,2/571,2 NMR SPECTROSCOPY I AND II** 2 credits each  
Prerequisite: 292 or permission of instructor. Theoretical basis and experimental techniques of NMR spectroscopy. Classical concepts and quantum mechanical treatments of NMR. Bloch equations; spin-spin and spin-lattice relaxation times. Steady state and transient phenomena. General features of broadline and high-resolution NMR spectra. NMR instrumentation and operating principles. Theory and analysis of high-resolution NMR spectra. Quantitative applications of broadline and high-resolution NMR spectra and determination of physical and chemical structures.
- 481,2/581,2 METHODS OF MATHEMATICAL PHYSICS I AND II** 3 credits each  
Prerequisites: 292, 3450:235 and senior or graduate standing in a physical science or engineering. Vectors, generalized coordinates, tensors, calculus of variations, vector spaces, linear transformations, matrices, eigenvalues, Hilbert space, boundary value problems, transcendental functions, complex variables, analytic functions, Green's functions, integral equations.
- 488/588 SELECTED TOPICS: PHYSICS** 1-4 credits  
(May be repeated) Prerequisite: permission. Consideration of selected topics, procedures, techniques, materials or apparatus of current interest in physics.
- 490/590 WORKSHOP** 1-4 credits  
(May be repeated) Group studies of special topics in physics. May not be used to meet undergraduate or graduate major requirements in physics. May be used for elective credit only.
- 497/597 INDEPENDENT STUDY** 1-4 credits  
(May be repeated) Prerequisite: permission. Further investigations of various selected topics in physics, under guidance of faculty member.
- 498/598 PHYSICS COLLOQUIUM** 1 credit  
Lectures on current research topics in physics by invited speakers. May be repeated but only one credit counts toward the M.S. Degree.

## POLITICAL SCIENCE

### 3700:

- 100 GOVERNMENT AND POLITICS IN THE UNITED STATES** 4 credits  
Examination of American political system with emphasis on fundamental principles, ideas, institutions and processes of modern government. Lecture and discussion sections (day classes only).
- 120 CURRENT POLICY ISSUES** 3 credits  
Survey of contemporary public policy issues by applying a broad conceptual framework. Cannot be used for credit toward major in political science.
- 150 WORLD POLITICS AND GOVERNMENTS** 3 credits  
Introduction to international politics and an examination of the governments and foreign policies of selected states from a comparative perspective.
- 201 INTRODUCTION TO POLITICAL RESEARCH** 3 credits  
Introduction to the research process in political science through an introduction to the logic of social science inquiry and contemporary techniques of analysis.
- 210 STATE AND LOCAL GOVERNMENT AND POLITICS** 3 credits  
Examination of institutions, processes and intergovernmental relations at state and local levels.
- 220 AMERICAN FOREIGN POLICY** 3 credits  
Examination of American foreign policy-making process; public opinion and other limitations on policy; specific contemporary problems in selected areas.
- 300 COMPARATIVE POLITICS** 4 credits  
Introduction to comparative political analysis; description of political systems of Great Britain, France, Germany and Soviet Union; contrast between democracy and totalitarianism.
- 301 ADVANCED POLITICAL RESEARCH** 3 credits  
Prerequisite: 201 or permission of instructor. Study and practice of political science research methods. Data collection, statistical analysis and presentation of empirical research projects. Computer applications used.
- 302 AMERICAN POLITICAL IDEAS** 3 credits  
Study of major thinkers and writers of American political thought.
- 303 INTRODUCTION TO POLITICAL THOUGHT** 3 credits  
Survey of major ideas and concepts of Western political theory from pre-Socrates through period of Enlightenment.
- 304 MODERN POLITICAL THOUGHT** 3 credits  
Examination of central concepts of political thought from 19th Century to present. Modern liberalism, communism, fascism and totalitarianism emphasized.
- 310 INTERNATIONAL POLITICS AND INSTITUTIONS** 4 credits  
Relations among nations examined in political context.
- 311 DEVELOPING STATES IN WORLD POLITICS** 3 credits  
Examines how developing states are conditioned by the global system and how they attempt to modify it.
- 312 THE POLITICS OF INTERNATIONAL TRADE AND MONEY** 3 credits  
Prerequisite: 310 or permission of instructor. Examines trade and money as sources of international power; focuses on the evolution of the Bretton Woods monetary and GATT trade regimes.
- 320 BRITAIN AND THE COMMONWEALTH** 3 credits  
Description and analysis of government and politics of Great Britain and leading nations of the Commonwealth.
- 321 WESTERN EUROPEAN POLITICS** 3 credits  
Description and analysis of government and politics of France, Germany, Italy and Switzerland, with appropriate references to Scandinavia and Low Countries.
- 322 POLITICS OF POST-COMMUNIST STATES** 3 credits  
Examines the changing political policies and processes of select post-Communist states of the former Soviet Union and East Central Europe.
- 323 POLITICS OF CHINA AND JAPAN** 3 credits  
Examination of governmental structures and political processes of China and Japan.
- 325 COMPARATIVE PUBLIC POLICY** 3 credits  
Considers the formulation, decisions, implementation, impact of public policies in a comparative perspective. By examining public policies in a variety of countries the relationship of different economic and political systems to policy outcomes is observed.
- 326 POLITICS OF DEVELOPING NATIONS** 3 credits  
General introduction to concepts and theories of political development and political institutions, elite-recruitment and political processes of selected emerging nations.
- 327 AFRICAN POLITICS** 3 credits  
Examination of patterns of government and politics of nations south of Sahara.
- 330 CANADIAN POLITICS** 3 credits  
An examination of the institutions and processes of Canadian government; a survey of some of the pressing issues confronting public decision makers in Canada.
- 341 THE AMERICAN CONGRESS** 3 credits  
Examination of structure and function of Congress, with comparative materials on legislative process on all levels. Presidential and congressional conflict examined.
- 342 MINORITY GROUP POLITICS** 3 credits  
Examination of political behavior of racial, religious and ethnic minority groups in the United States.
- 350 THE AMERICAN PRESIDENCY** 3 credits  
The presidency as focal point of politics, policy and leadership in American political system.
- 360 THE JUDICIAL PROCESS** 3 credits  
Role of police, lawyers, courts and judges in context of American political process. Structure and process of judicial policy making and limitations on judicial power.
- 361 POLITICS OF THE CRIMINAL JUSTICE SYSTEM** 3 credits  
Examines the impact of the political process and political institutions on criminal law and policy.
- 370 PUBLIC ADMINISTRATION: CONCEPTS AND PRACTICES** 4 credits  
Examines current administrative theories and their application in public bureaucracies. Emphasis is placed on practices to improve the quality of public sector administration.
- 380 URBAN POLITICS AND POLICIES** 4 credits  
Examination of problems emerging from urban and regional complexes in the United States. Structure and processes of political decision making at this level analyzed.
- 381 STATE POLITICS** 3 credits  
Analysis of the state political process in terms of its capacity to deal with a wide range of socio-economic problems. Special emphasis on legislators, administrators, parties and interest groups.
- 382 INTERGOVERNMENTAL RELATIONS** 3 credits  
An examination of the history, theory, contemporary activities of intergovernmental relations in the United States. Interactions of local, state federal units of government will be considered.
- 391 HONORS IN POLITICAL SCIENCE** 3 credits  
Prerequisites: at least 17 credits and a 3.25 average in political science and permission of adviser.
- 392 SELECTED TOPICS IN POLITICAL SCIENCE** 1-3 credits  
(May be repeated, but no more than three credits can be applied to major in political science) Topics of substantial current importance, specialized topics within political science or experimental courses.
- 395 INTERNSHIP IN GOVERNMENT AND POLITICS** 2-9 credits  
(May be taken twice for a total of nine hours. No more than four credits may be applied toward major in political science.) Prerequisite: Three courses in political science at The University of Akron, 2.20 average in political science, and permission of instructor. Supervised individual placement with political office holders, party groups, governmental agencies, law firms and other organizations providing professional-level work.
- 397 INDEPENDENT STUDY** 1-4 credits  
(May be repeated for a total of four credits) Prerequisites: senior standing, 3.00 grade-point average and permission of adviser.
- 402/502 POLITICS AND THE MEDIA** 3 credits  
Examination of relationships between the press, the news media and political decision makers.

- 406/505 POLITICS IN THE MIDDLE EAST** 3 credits  
The rise of the state system in the Middle East after World War I; an analysis of the socio-cultural, ideological forces influencing the political behavior of the people of the Middle East. In-depth study of selected political systems.
- 410/510 INTERNATIONAL DEFENSE POLICY** 3 credits  
Prerequisite: At least one of the following: 220, 310; 3400:380, 382, 460, 461, or permission. Introduction to political uses of military forces. Major focus on methodological, conceptual, and ethical dilemmas confronted in developing and implementing defense policy.
- 411/511 THEORIES OF INTERNATIONAL POLITICAL ECONOMY** 3 credits  
Prerequisite: 310 or permission of instructor. This course examines the predominant and competing theories of international political economy, including imperialism, world systems analysis, long-wave theory, neo-mercantilism, and neo-realism.
- 412/512 GLOBAL ENVIRONMENT POLITICS** 3 credits  
Prerequisites: 300, 310 or permission of instructor. Examines the general dimensions of the global environmental challenge, including the roles played by technology and the structure of the world system.
- 415/515 COMPARATIVE FOREIGN POLICY** 3 credits  
Prerequisite: 310 or 220 or permission. Study of foreign policies of selected nations, with special attention to processes and instruments of decision making of the major powers.
- 420/520 ISSUES AND APPROACHES IN COMPARATIVE POLITICS** 3 credits  
Prerequisite: 300 or permission of instructor. Detailed examination of approaches to the study of comparative politics, political parties, elites and various theories of revolution.
- 425/525 LATIN AMERICAN POLITICS** 3 credits  
Prerequisite: 300 or permission of instructor. Examination of patterns of government and politics in Latin American area.
- 440/540 SURVEY RESEARCH METHODS** 3 credits  
Prerequisites: 100 or 120 or permission. Study of survey research methods as applied to the analysis of public opinion, political behavior, and public policy formation.
- 441/541 THE POLICY PROCESS** 3 credits  
Prerequisites: eight credits in political science. Intensive study of policy-making process, emphasizing roles of various participants in executive and legislative branches as well as private individuals and groups.
- 442/542 METHODS OF POLICY ANALYSIS** 3 credits  
Prerequisite: 201. Examines variety of methods available for analyzing public policies. Techniques of cost benefit analysis, evaluation research quasi-experimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.
- 461/561 THE SUPREME COURT AND CONSTITUTIONAL LAW** 3 credits  
Prerequisite: 100 or permission. Interpretation of the Constitution by the Supreme Court with emphasis on federal judicial, legislative and executive power; separation of powers; and federalism.
- 462/562 THE SUPREME COURT AND CIVIL LIBERTIES** 3 credits  
Prerequisite: 100 or permission. Interpretation of the Constitution by the Supreme Court with emphasis on freedom of speech and press, freedom of religion, criminal rights and right to privacy.
- 470/570 CAMPAIGN MANAGEMENT I** 3 credits  
Prerequisite: Six credits of political science or permission. Reading, research and practice in campaign management decision making.
- 471/571 CAMPAIGN MANAGEMENT II** 3 credits  
Prerequisite: 470. The second course in campaign management. The focus is on timing, coalition building, candidate positioning, event planning, internal organization, and other elements of campaign strategy.
- 472/572 CAMPAIGN FINANCE** 3 credits  
Prerequisite: six credits of political science or permission. Reading and research in financial decision making in political campaigns.
- 473/573 VOTER CONTACT AND ELECTIONS** 3 credits  
Prerequisite: six credits of political science or permission. Theoretical and practical approaches to communication in all types of campaigns.
- 474/574 POLITICAL OPINION, BEHAVIOR AND ELECTORAL POLITICS** 3 credits  
Prerequisite: 100 or 201 or permission. Advanced analysis of psychological, cultural, and group processes of opinion formation and change. Attention given to the effect of opinion change on electoral outcomes.
- 475/575 AMERICAN INTEREST GROUPS** 3 credits  
Prerequisite: six credits of political science or permission. Reading and research on the development, structure and function of interest groups in the United States.
- 476/576 AMERICAN POLITICAL PARTIES** 3 credits  
Prerequisites: six credits of political science or permission. Reading and research on the development, structure and function of parties in the United States.
- 480/580 POLICY PROBLEMS** 3 credits  
(May be repeated for a total of six credits) Prerequisite: 380 or permission. Intensive study of selected problems in public policy.
- 480/590 WORKSHOP** 1-3 credits  
(May be repeated) Group studies of special topics in political science. May not be used to meet undergraduate or graduate requirements in political science. Elective credit only.
- 497 SENIOR HONORS PROJECT IN POLITICAL SCIENCE** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to a political science major in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## PSYCHOLOGY

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### 3750:

- 100 INTRODUCTION TO PSYCHOLOGY** 3 credits  
Introduction to scientific study of behavior, survey of physiological basis of behavior, sensation and perception, development, learning and cognition, personality, social interaction and other selected topics.
- 105 PROFESSIONAL AND CAREER ISSUES IN PSYCHOLOGY** 1 credit  
Corequisite: 100. An overview of the field of psychology including educational requirements, career opportunities and professional issues for students considering a psychology major.
- 110 QUANTITATIVE METHODS IN PSYCHOLOGY** 4 credits  
Prerequisite or corequisite: 100. Presentation of data, descriptive statistics, correlation, hypothesis testing and introduction to statistical methodologies in psychology, including computer applications.
- 220 INTRODUCTION TO EXPERIMENTAL PSYCHOLOGY** 4 credits  
Prerequisites: 100 and 110. Lectures and laboratory experience in the scientific bases of psychology such as experimental design, methods and apparatus, collection and analysis of data and interpretation of results.
- 230 DEVELOPMENTAL PSYCHOLOGY** 4 credits  
Prerequisite: 100. Determinants and nature of behavioral change from conception to death.
- 240 INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY** 4 credits  
Prerequisite: 100. Survey of applications of psychology in industry, business and government with emphasis on understanding employees and evaluating their behavior.
- 320 BIOPSYCHOLOGY** 4 credits  
Prerequisites: 100 and 110 or 220 or 230 or 240. Relationship between behavior and its biological/physiological foundations including brain structure and function, sensation, behavior genetics, learning and memory, and other topics.
- 335 DYNAMICS OF PERSONALITY** 4 credits  
Prerequisites: 100, and 110 or 220 or 230 or 240. An overview of theory and research involving the development, maintenance and assessment of personality and individual differences.
- 340 SOCIAL PSYCHOLOGY** 4 credits  
Prerequisites: 100, and 110 or 220 or 230 or 240. The examination of an individual's response to social environment and social interaction processes. Social perception, attitude formation and change, affiliation and attraction, altruism, group processes and nonverbal behavior.
- 345 COGNITIVE PROCESSES** 4 credits  
Prerequisites: 100, and 110 or 220 or 230 or 240. Survey of the basic phenomena, concepts and theories in the areas of human perception, learning, memory and cognition.
- 400/500 PERSONALITY** 4 credits  
Prerequisites: 400—100 and 335; 500—admission to the Graduate School. Consideration of current conceptualizations of the normal personality with emphasis on methods of measurement, experimental findings and research techniques.
- 410/510 PSYCHOLOGICAL TESTS AND MEASUREMENTS** 4 credits  
Prerequisites: 410—100 and 110 and 320 or 335 or 340 or 345; 510—admission to the Graduate School. Consideration of the nature, construction and use of tests and measurements in industry, government and education. Includes aptitude and achievement tests, rating scales, attitude and opinion analysis.
- 420/520 ABNORMAL PSYCHOLOGY** 4 credits  
Prerequisites: 420—100, and 320 or 335 or 340 or 345; 520—admission to the Graduate School. Survey of syndromes, etiology, diagnosis and treatments of major psychological conditions ranging from transient maladjustments to psychoses.
- 430/530 PSYCHOLOGICAL DISORDERS OF CHILDREN** 4 credits  
Prerequisites: 430—100 and 230; 530—admission to the Graduate School. Survey of syndromes, etiologies and treatments of behavioral disorders in children from standpoint of developmental psychology. Behavioral data and treatment approaches emphasized.
- 435 CROSS-CULTURAL PSYCHOLOGY** 4 credits  
Prerequisites: 100, and 320 or 335 or 340 or 345. Influence of culture and ethnicity upon development of individual psychological processes including functioning, identity, social motives, sex roles and values.
- 441 CLINICAL AND COUNSELING PSYCHOLOGY I** 4 credits  
Prerequisites: 100, and 110 or 220 or 230 or 240, and 320 or 335 or 340 or 345. Overview of the fields of clinical and counseling psychology including counseling and psychotherapeutic approaches, vocational counseling, assessment, research, training and professional issues.
- 442 CLINICAL AND COUNSELING PSYCHOLOGY II** 4 credits  
Prerequisite: 441. Overview of individual counseling and psychotherapy, group counseling, personality and ability testing, marriage and family counseling, hypnosis, sex therapy, psychopharmacology and related specialties. Specific topics in clinical and counseling practice including professional trends, ethics, various therapeutic and diagnostic procedures, and specialty areas.
- 443/543 HUMAN RESOURCE MANAGEMENT** 4 credits  
Prerequisites: 443—100 and 110 and 240, and 320 or 335 or 340 or 345. Or 8500:301; 543—admission to the Graduate School. The application of psychological theory to the effective management of human resources in an organization, including recruitment, selection, training and retention of personnel.
- 444/544 ORGANIZATIONAL THEORY** 4 credits  
Prerequisites: 444—100 and 240, and 320 or 335 or 340 or 345. Or 8500:301; 544—admission to the Graduate School. The application of psychological theory to macro-level processes in organizations including leadership, motivation, task performance, organizational theories and development.
- 445/545 PSYCHOLOGY OF SMALL GROUP BEHAVIOR** 4 credits  
Prerequisites: 445—100, and 110 or 220 or 230 or 240, and 320 or 335 or 340 or 345; 545—admission to the Graduate School. Intensive investigation of factors affecting behavior and performance in small groups including effects of personality, social structures, task, situational and social-cognitive variables.

- 446 RESEARCH DESIGN AND ANALYSIS** 4 credits  
Prerequisites: 100 and 110 and 220, and 335 or 340. Review of psychological methodology including research design and analysis, internal and external validity, measurement of constructs and specific analytic techniques.
- 450/550 COGNITIVE DEVELOPMENT** 4 credits  
Prerequisite: 450—100 and 345; 550—admission to the Graduate School. Theory and research on life-span changes in cognitive processes including concept formation/categorization, information processing and Piagetian assessment tasks.
- 460/560 HISTORY OF PSYCHOLOGY** 3 credits  
Prerequisite: 100 and 110 or 220 or 230 or 240; and 320 or 335 or 340 or 345; 560—admission to the Graduate School. Psychology in pre-scientific period and details of developmental or systematic viewpoints in 19th and 20th Centuries.
- 475 PSYCHOLOGY OF ADULTHOOD AND AGING** 4 credits  
Prerequisites: 100 and 230. Psychological aspects of human development from adolescence to older adulthood including age-related changes in socialization, personality, intelligence, sensation, perception learning, memory and clinical applications.
- 480 SPECIAL TOPICS IN PSYCHOLOGY** 1-4 credits  
(May be repeated to a maximum of 8 credits) Prerequisite: 100 and 64 credits completed. Comprehensive survey of contemporary status of specialized topics and issues in psychology. Emphasis on original source materials, critical analysis and synthesis of empirical and theoretical aspects.
- 485 APPLIED DEVELOPMENTAL PSYCHOLOGY** 4 credits  
Prerequisites: 100, and 110 or 220 or 230 or 240, and 320 or 335 or 340 or 345. Conceptual and methodological issues in life-span developmental psychology. The approach is data-based, multidisciplinary and problem-focused.
- 488,9 HONORS PROJECT IN PSYCHOLOGY** 4 credits each  
Prerequisite: Psychology major and departmental permission, and 100 and 105 and 110 and 220, and 320 or 335 or 340 or 345. 488: Selection of research topic, review of relevant literature, research design, and proposal. 489: Data collection, analysis, and preparation of the final research report in journal style.
- 490/590 WORKSHOP IN PSYCHOLOGY** 1-5 credits  
(May be repeated. May not be used to meet undergraduate or graduate major requirements in psychology.) Prerequisites: 490—3750:100 and 64 credits completed; 590—admission to the Graduate School. Group studies of special topics in psychology.
- 495 FIELD EXPERIENCE IN PSYCHOLOGY** 2-4 credits  
(May be repeated to a maximum of 6 credits. Minimum of 4 credits required for Psychology Technician Program). Prerequisites: Psychology major, and departmental permission, and 100 and 105 and 110 and 220, and 230 or 240, and 335 or 340, and 410. On-site supervised individual placements as a psychology assistant in appropriate community and institutional/organizational settings.
- 497 INDEPENDENT READING, AND/OR RESEARCH IN PSYCHOLOGY** 1-3 credits  
(May be repeated to a maximum of 6 credits). Prerequisites: Departmental permission, and 3750:100 and 64 credits completed. Independent reading and/or research in an area of psychology under the supervision and evaluation of a selected faculty member.
- 323 SOCIAL CHANGE** 3 credits  
Prerequisite: 100 or permission. Introduction to theories and processes of social change, dimensions of change in contemporary, traditional and urban-industrial societies; projection and prediction of selected trends and forms. Lecture.
- 324 SOCIAL MOVEMENTS** 3 credits  
Prerequisite: 100 or permission. Social movements as distinguished from other forms of collective behavior; analysis of social situations which produce social movements; focus on development of social movements and their role in social change. Lecture.
- 330 CRIMINOLOGY** 3 credits  
Prerequisite: 100. Major focus on interrelationships and analysis of crimes, criminals, criminal justice systems and society. Lecture.
- 334 SOCIAL ORGANIZATION** 3 credits  
Prerequisite: 100 or permission. Nature of social organization, social control; organizational typologies; theories of organizational structure, functions; analysis of complex organizations in a social system. Lecture.
- 335 SOCIAL BEHAVIOR IN ORGANIZATIONS** 3 credits  
Prerequisite: 100 or permission. Analysis of the structure of such complex organizations as voluntary associations, business organizations and public bureaucracies, in relation to issues including organizational effectiveness, organizational design and change, job satisfaction and quality of work experience. Lecture.
- 336 SOCIOLOGY OF WORK AND OCCUPATIONS** 3 credits  
Prerequisite: 100 or permission. Survey of theory and empirical research in areas such as the structure of occupations and professions, occupational attainment, work force characteristics, work values and orientations, the nature of work. Lecture.
- 340 THE FAMILY** 3 credits  
Prerequisite: 100 or permission. Analysis of family as a social system; historical, comparative and contemporary sociological approaches examined in relation to family structure and functions. Lecture.
- 341 POLITICAL SOCIOLOGY** 3 credits  
Prerequisite: 100 or permission. Survey of theory and empirical research dealing with relationship between political phenomena and the larger network of social processes in human societies. Lecture.
- 342 SOCIOLOGY OF HEALTH AND ILLNESS** 3 credits  
Prerequisite: 100 or permission. General survey of sociological perspectives, concepts and research on health, illness and health-care delivery systems. Lecture.
- 343 THE SOCIOLOGY OF AGING** 3 credits  
Prerequisite: 100 or permission. Examination of process of aging from perspective of behavioral and sociological aspects. Lecture.
- 344 THE SOCIOLOGY OF SEX ROLES** 3 credits  
Prerequisite: 100 or permission. Examination of differentiation in roles, behaviors in women, men including theory, evidence on origins and determinants of differences, on stability and change in sex roles.
- 345 FAMILY AND HEALTH** 3 credits  
Prerequisites: 100 or permission. Survey of interrelationships between family structure and functioning and the health care system. Includes historical perspectives as well as current conditions.
- 365 SPECIAL TOPICS IN SOCIOLOGY** 1-3 credits  
(May be repeated) Prerequisite: permission. Special topics of interest to sociology major and non-major not covered in regular course offerings.
- 397 SOCIOLOGICAL READINGS AND RESEARCH** 1-3 credits  
Prerequisite: permission. Individual study of problem area of specific interest to individual student under guidance of department member. Preparation of a research paper.
- 403/503 HISTORY OF SOCIOLOGICAL THOUGHT** 3 credits  
Prerequisite: 100 or permission. Examination of major scholars in the classical sociological tradition. Lecture.
- 404/504 CONTEMPORARY SOCIOLOGICAL THEORIES** 3 credits  
Prerequisite: 403 or permission. Examination and critical evaluation of works of modern sociological theorists, emphasizing current theoretical approaches to issues of social order and social change. Lecture.
- 410/510 SOCIAL STRUCTURES AND PERSONALITY** 3 credits  
Prerequisite: 100 or permission. Interrelationships between position in society, personality characteristics. Personality treated as both result and determinant of social structure and process. Lecture.
- 411/511 SOCIAL INTERACTION** 3 credits  
Prerequisite: 100 or permission. Intensive study of advanced theory and research in social psychology, particularly how social interaction and self-conception affect one another. Lecture.
- 412/512 SOCIALIZATION: CHILD TO ADULT** 3 credits  
Prerequisite: 100 or permission. Theoretical and empirical analyses of process by which infant, child, adolescent and adult learn social and cultural requirements necessary to function in new roles, changing roles and society in general.
- 421/521 RACIAL AND ETHNIC RELATIONS** 3 credits  
Prerequisite: 100 or permission. Analysis of structure and dynamics of race and ethnic relations from a variety of perspectives emphasizing both historical and contemporary issues. Lecture.
- 423/523 SOCIOLOGY OF WOMEN** 3 credits  
Prerequisites: 100 or permission of instructor. Examination of research and theories pertaining to women's status in society, including economic conditions, the relationship between structure and experience, and other gender-related issues.
- 425/525 SOCIOLOGY OF URBAN LIFE** 3 credits  
Prerequisite: 100 or permission. Emergence and development of urban society. Examination of urban social structure from neighborhood to metropolis, the problems and prospects. Emphasis on various life styles of urban subcultures. Lecture/discussion.

## SOCIOLOGY

### 3850:

- 100 INTRODUCTION TO SOCIOLOGY** 4 credits  
Basic terminology, concepts and approaches in sociology, including introduction to analysis of social groups and application of sociological concepts to the understanding of social systems. Required of majors. Lecture/discussion.
- 104 SOCIAL PROBLEMS** 3 credits  
Prerequisite: 100 or permission. Analysis of selected contemporary problems in society; application of sociological concepts and research as tools for understanding sources of such problems. Lecture.
- 301 METHODS OF SOCIAL RESEARCH I** 3 credits  
Prerequisites: 100 and 3450:145 or equivalent or permission. Lecture/laboratory course (minimum of two laboratory hours per week). Research design and data-gathering techniques. Required of all majors except sociology/anthropology.
- 302 METHODS OF SOCIAL RESEARCH II** 3 credits  
Prerequisite: 100 and 301 and 3450:145 or equivalent (Sociology/anthropology majors are excused from the 301 prerequisite) or permission. Quantitative techniques and application to sociological data. Combination lecture and laboratory course requiring at least two laboratory hours per week. Required of majors. Lecture/laboratory.
- 315 SOCIOLOGICAL SOCIAL PSYCHOLOGY** 3 credits  
Prerequisite: 100. The reciprocal influence of individuals and groups. How interpersonal processes produce and affect group structure. How groups affect the development and behavior of the social person.
- 320 SOCIAL INEQUALITY** 3 credits  
Prerequisite: 100 or permission. Study of the way social rankings occur in societies and how particular rankings affect individual behavior, group relations and social structures. Lecture.
- 321 POPULATION** 3 credits  
An introduction to world and national population trends, related demographic and social characteristics. Topics include fertility, mortality, morbidity, migration, abortion, birth control, population policy in relation to societal problems. Lecture.

- 428/528 THE VICTIM IN SOCIETY** 3 credits  
Prerequisites: 100 or permission of instructor. Study of the nature, causes, and consequences of victimization with special focus on crime victimization.
- 429/529 PROBATION AND PAROLE** 3 credits  
Prerequisite: 330 or 430 or permission. Analysis of how probationers and parolees are selected, supervised and then released into private life. Emphasis on current and past social research. Lecture/discussion.
- 430/530 JUVENILE DELINQUENCY** 3 credits  
Prerequisite: 100 or permission. Analysis of social structure and process from which delinquency develops. Emphasis on current and past research. Lecture/discussion.
- 431/531 CORRECTIONS** 3 credits  
Prerequisite: 330 or 430. Theories, belief systems, correctional practices and effectiveness as related to offender groups. Lecture/discussion/field experience.
- 433/533 SOCIOLOGY OF DEVIANT BEHAVIOR** 3 credits  
Prerequisites: 100 and at least six additional credits of sociology courses or permission. Survey of theories of deviant behavior and relevant empirical research. Special emphasis given to interaction processes and social control. Lecture.
- 440/540 SOCIOLOGY OF RELIGION** 3 credits  
Prerequisite: 100 or permission. Study of forms of religion and their social functions with emphasis on religion in American society. Lecture.
- 441/541 SOCIOLOGY OF LAW** 3 credits  
Prerequisites: 100 and at least six additional credits of sociology courses or permission. Social origins and consequences of law and legal processes. Emphasis on uses of law, social change and aspects of legal professions. Lecture.
- 442/542 SOCIOLOGY OF EDUCATION** 3 credits  
Prerequisite: 100 or permission. Analysis of education from an organizational and social psychological perspective. Topics include: desegregation; busing; neighborhood schools; impact of family, peers and teachers on learning; school organization. Lecture.
- 443/543 INDUSTRIAL SOCIOLOGY** 3 credits  
Prerequisite: six credits of sociology or industrial management. Comparison of formal and informal structures in industrial organizations; analysis of work roles and status systems; communication processes; relation of work plant to community and society. Lecture.
- 444/544 SOCIAL ISSUES IN AGING** 3 credits  
Prerequisite: 100 or permission. A look into the major issues and problems facing older persons. Special attention is given to the unmet needs of the elderly as well as an examination of current societal policy and programs to meet these needs.
- 445/545 SOCIOLOGY OF MENTAL ILLNESS** 3 credits  
Prerequisite: 100 or permission. The social history of the mental hospital, theories and epidemiology of mental illness, community-based treatment models, the organization of mental health services, the role of personal social networks and mutual support groups.
- 484/584 WORKSHOP IN SOCIOLOGY** 1-3 credits  
(May be repeated) Group studies of special topics in sociology. May not be used to meet departmental undergraduate or graduate major requirements. May be used for elective credit only.
- 495 RESEARCH INTERNSHIP** 2-4 credits  
(May be repeated for credit) Prerequisites: 301, 302 and permission of a faculty supervisor. Placement in selected community organization for supervised experience in all phases of a social research project. Student must receive permission from instructor during semester prior to enrollment.
- 496 SENIOR HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: enrollment in Honors Program and senior standing, and major in sociology or sociology/anthropology. Thesis or original creative work appropriate to student's area of interest. Requirements and evaluation of project determined by departmental honors preceptor and student's honors project adviser.

## ANTHROPOLOGY

### 3870:

- 150 CULTURAL ANTHROPOLOGY** 4 credits  
Introduction to study of culture; cross-cultural view of human adaptation through technology, social organization and ideology. Lecture.
- 151 EVOLUTION OF MAN AND CULTURE** 3 credits  
Biological and cultural evolution of Homosapiens; comparative study of Primates; human variation; Old World archaeology. Lecture.
- 270 CULTURES OF THE WORLD** 3 credits  
Prerequisite: 150 or permission of instructor. An examination of diversity in pre-industrial cultures; the ways in which cultures differ and the major processes which produce cultural differences.
- 355 INDIANS OF SOUTH AMERICA** 3 credits  
Prerequisite: 150 or 3850:100 or permission. Survey of aboriginal peoples of South America, with emphasis on culture areas and continuity of culture patterns. Lecture.
- 356 ARCHAEOLOGY OF THE AMERICAS** 3 credits  
Prerequisite: 150 or 3850:100 or permission. Survey of prehistoric cultures of North, Middle and South America; beginning with peopling of Western Hemisphere and ending with European contact. Lecture.
- 357 MAGIC, MYTH AND RELIGION** 3 credits  
Prerequisite: 150 or 3850:100. Analysis and discussion of the data concerning the origins, roles and functions of magic and religion in a broad range of human societies, with emphasis on the non-Western, pre-industrial societies. Examination of belief and ritual systems of such societies.
- 358 INDIANS OF NORTH AMERICA** 3 credits  
Prerequisite: 150 or permission. Ethnographic survey of native cultures of North America, with emphasis on variations in ecological adaptations, social organization and modern American Indians in anthropological perspective. Lecture.
- 397 ANTHROPOLOGICAL RESEARCH** 1-3 credits  
(May be repeated) Prerequisite: permission. Individual study of problem areas of specific interest to an individual student under guidance of a faculty member.
- 405/505 HISTORY AND THEORY IN ANTHROPOLOGY** 3 credits  
Prerequisite: 150 or permission. Survey of theories and problems in social and cultural anthropology. Historical development, methods of inquiry and contemporary theoretical perspectives.
- 455/555 CULTURE AND PERSONALITY** 3 credits  
Prerequisite: 150 or permission. Examination of functional and causal relationships between culture and individual cognition and behavior. Lecture.
- 457/557 CULTURE AND MEDICINE** 3 credits  
Prerequisite: 150 or permission of instructor. Analyzes various aspects of Western and non-Western medical systems from an anthropological perspective. Compares traditional medical systems around the world.
- 461/561 LANGUAGE AND CULTURE** 3 credits  
Prerequisite: 150 or permission. Examination of language structure and interaction of language, cognition and culture. Lecture.
- 463/563 SOCIAL ANTHROPOLOGY** 3 credits  
Prerequisite: 150 or permission. Comparative structural analysis of non-Western systems of kinship and social organization in terms of status, role, reciprocal expectation, nomenclature, nuclear and extended households and other kinship groupings. Lecture.
- 472/572 SPECIAL TOPICS: ANTHROPOLOGY** 3 credits  
(May be repeated) Prerequisites: 150 and permission. Designed to meet needs of student with interests in selected topics in anthropology. Offered irregularly when resources and opportunities permit. May include archaeological field school, laboratory research or advanced course work not presently offered by department on regular basis.
- 494/594 WORKSHOP IN ANTHROPOLOGY** 1-3 credits  
(May be repeated) Group studies of special topics in anthropology. May not be used to meet departmental undergraduate or graduate major requirements. May be used for elective credit only.

# College of Engineering

## GENERAL ENGINEERING

### 4100:

- 101 TOOLS FOR ENGINEERING** 3 credits  
Corequisite: 3450:221. Introduction to engineering. Free hand, engineering, and CAD drawing. Introduction to computer programming, computer applications including word processing, spreadsheets, data base. Introduction to engineering economics. Required for Chemical, Civil, and Electrical Engineering majors.
- 201 ENERGY AND ENVIRONMENT** 2 credits  
Interactions between energy production, consumption and environment. Case studies. Not for engineering, chemistry or physics majors.
- 202 ATMOSPHERIC POLLUTION** 2 credits  
Causes of atmospheric pollution and technical economic and social problems. Technical solutions. Case studies. Not for engineering, chemistry or physics majors.
- 203 ENVIRONMENTAL SCIENCE AND ENGINEERING** 3 credits  
Science and engineering fundamentals required to understand environmental issues and alternative solutions. Not for engineering, chemistry, or physics majors.
- 300 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Elective for cooperative education student who has completed sophomore year. Practice in industry and comprehensive written reports of this experience.
- 301 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered spring semester of third year.
- 302 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered fall semester of fourth year.
- 403 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered summer after fourth year.

## CHEMICAL ENGINEERING

### 4200:

- 121 CHEMICAL ENGINEERING COMPUTATIONS** 2 credits  
Prerequisites: 101 or permission. Computer programming language, flowcharting, introductory simulation and introductory numerical analysis.
- 200 MATERIAL AND ENERGY BALANCES** 4 credits  
Prerequisites: 121, 3450:221 and 3150:154. Introduction to material, energy balance calculations applied to solution of chemical problems.
- 225 EQUILIBRIUM THERMODYNAMICS** 4 credits  
Prerequisites: 200 and 3450:222. Second law of thermodynamics, entropy, applications, comprehensive treatment of pure and mixed fluids. Phase and chemical equilibria, flow processes, power production and refrigeration processes covered.
- 305 MATERIALS SCIENCE** 2 credits  
Prerequisites: 3150:133 and 3650:292 and junior standing. Structure, processing and properties of metals, ceramics and polymers. Special topics, such as composites, corrosion and wear.
- 321 TRANSPORT PHENOMENA I** 3 credits  
Prerequisites: 200 and 3450:222. Constitutive equations for momentum and energy transfer. Development of microscopic and macroscopic momentum and energy equations. Analogy and dimensions correlations. Problems and applications in unit operations of chemical engineering.
- 322 TRANSPORT PHENOMENA II** 3 credits  
Prerequisite: 321. Constitutive equations for mass transfer. Development of microscopic and macroscopic momentum, energy and mass transfer equations for binary systems. Problems and applications in unit operations of chemical engineering.
- 330 CHEMICAL REACTION ENGINEERING** 3 credits  
Prerequisite: 225. Nonequilibrium processes including chemical reaction mechanisms, rate equations and ideal reactor design applied to homogeneous and heterogeneous systems.
- 351 FLUID AND THERMAL OPERATIONS** 3 credits  
Prerequisite: 321. Applications of fluid mechanics including piping, pumping, compression, metering, agitation and separations. Applications of heat transfer by conduction, convection and radiation to design of process equipment.

- 352 TRANSPORT LABORATORY** 2 credits  
Prerequisites: 322 and 351. Experiments in fluid, heat and mass transfer. Data collection, analysis and reporting in various formats. Relationships to theory emphasized.
- 353 MASS TRANSFER OPERATIONS** 3 credits  
Prerequisites: 225, 351 and 322. Theory and design of staged operations including distillation, extraction, absorption. Theory and design of continuous mass transfer devices.
- 408 POLYMER ENGINEERING** 3 credits  
Prerequisite: permission or senior standing. Commercial polymerization, materials selection and property modification, polymer processing, applied rheology and classification of polymer industry.
- 435 PROCESS ANALYSIS AND CONTROL** 3 credits  
Prerequisites: 330, 353. Response of simple and chemical processes and design of appropriate control systems.
- 438 ENERGY INTEGRATION** 3 credits  
Prerequisite: 351. This course uses Pinch Design formalism to present the core energy integration tools for energy and area targeting, and tools for integration of reactors, distillation columns, and heat pumps.
- 441 PROCESS ECONOMICS AND DESIGN** 4 credits  
Prerequisites: 330, 351, 353. Economic evaluation of chemical plants including justification, profitability, capital investment and operating costs. Design of chemical process equipment.
- 442 PLANT DESIGN** 4 credits  
Prerequisite: 441. Integration of process and equipment design for a total plant including justification, site selection and plant layout. Culminates with a case study or A.I.Ch.E. Student Contest Problem.
- 454 OPERATIONS LABORATORY** 1 credit  
Prerequisites: 352, 353. Comprehensive experiments and analysis in combined heat and mass transfer, thermodynamics and reaction kinetics. Comprehensive reports.
- 461/561 SOLIDS PROCESSING** 3 credits  
Prerequisites: 321 and 353 or permission. Comprehensive problems in sedimentation, fluidization, drying and other operations involving mechanics of particulate solids in liquid and gas continua.
- 462 INDUSTRIAL ENZYME TECHNOLOGY** 3 credits  
Prerequisites: 330 and 351. Application of chemical engineering to biological processes involving enzymes and their industrial applications. Special emphasis given to the kinetics, control, design, and process economics aspects.
- 463/563 POLLUTION CONTROL** 3 credits  
Prerequisite: 353 or permission. Air and water pollution sources and problems. Engineering aspects and methodology.
- 466/566 DIGITIZED DATA AND SIMULATION** 3 credits  
Prerequisite: permission. Data acquisition and analysis by digital devices, digital control applications and design.
- 470/570 ELECTROCHEMICAL ENGINEERING** 3 credits  
Prerequisites: 322, 330. Chemical engineering principles as applied to the study of electrode processes and to the design of electrochemical reactors. Topics include electrochemical thermodynamics, cell polarizations, Faraday's Laws, electrode kinetics, transport processes in electrochemical systems, current distributions, reactor design, experimental methods, commercial processes, and batteries and fuel cells.
- 471 FUEL ENGINEERING** 3 credits  
Prerequisite: 330 or permission of instructor. Topics related to clean liquid and solid fuels technology. Special emphasis given to design, system analysis, environmental impacts, and novel technologies.
- 472 SEPARATION PROCESSES IN BIOCHEMICAL ENGINEERING** 3 credits  
Introduction to the separation and purification techniques pertinent to bioprocesses, with emphasis on engineering considerations for large scale operations.
- 473 BIOREACTOR DESIGN** 3 credits  
Prerequisite: 330 or instructor's consent. Design, analysis, and scale-up of bioreactors for various biological processes.
- 488 CHEMICAL PROCESSES DESIGN** 3 credits  
Prerequisite: permission of instructor or senior standing. Process design and analysis of emerging chemical technologies. Case studies, such as in-situ processing, alternative fuels, bioremediation, and engineering materials manufacture.
- 494 DESIGN PROJECT** 3 credits  
Prerequisite: Permission or senior standing. Individual design project pertinent to chemical engineering under faculty supervision. Written report and oral presentation required.
- 496 TOPICS IN CHEMICAL ENGINEERING** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Topics selected from new and developing areas of chemical engineering, such as electrochemical engineering, coal and synthetic fuels processing, bioengineering, simultaneous heat and mass transfer phenomena and new separation techniques.
- 497 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: special permission. Individual creative project pertinent to chemical engineering culminating in undergraduate thesis, supervised by faculty member of the department.
- 499 RESEARCH PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Individual research project pertinent to chemical engineering under faculty supervision. Report required.

**CIVIL ENGINEERING****4300:**

- 201 STATICS** 3 credits  
Corequisites: 3450:222 and 3650:291. Forces, resultants, couples; equilibrium of force systems; distributed forces; centers of gravity, analysis of simple structures; moments of inertia; kinematics.
- 202 INTRODUCTION TO MECHANICS OF SOLIDS** 3 credits  
Prerequisite: 201. Axial force, bending moment diagrams, axial stress and deformation; stress-strain diagrams; torsion; flexural stress; flexural shearing stress; compound stresses; indeterminate beams; columns.
- 230 SURVEYING** 3 credits  
Basic tools and computations for surveying; measurement of distance elevation and angles; traverse surveys. Laboratory field practice.
- 306 THEORY OF STRUCTURES** 3 credits  
Prerequisite: 202. Stability and determinacy; statically determinate trusses and frames; approximate frame analysis influence lines; moving loads; virtual work analysis; moment area theorem; theorem of three moments; moment distribution for continuous beams and frames.
- 313 SOIL MECHANICS** 3 credits  
Prerequisite: 202 or permission. Physical properties of soils. Soil water and groundwater flow. Stresses, displacements, volume changes, consolidation within a soil mass. Soil strength. Compaction.
- 314 GEOTECHNICAL ENGINEERING** 3 credits  
Prerequisite: 313. Limiting equilibrium within a soil mass. Design of retaining walls, bulkheads, shallow, deep foundation systems. Slope stability. Laboratory study of soil properties and behavior.
- 323 WATER SUPPLY AND POLLUTION CONTROL** 4 credits  
Prerequisites: 3150:133, 4600:310. Water and wastewater characteristics, criteria, quantities and distribution. Water and wastewater treatment process flowsheets, design and operation. Wastewater and residue disposal.
- 341 HYDRAULIC ENGINEERING** 3 credits  
Prerequisite: 4600:310. Flow in pipelines and pipe networks, pumps and pumping stations, seepage, elements of hydrology, flow in open channels, design of hydraulic structures, water resources engineering.
- 361 TRANSPORTATION ENGINEERING** 3 credits  
Prerequisite: junior standing. Introductory survey of transportation topics including transportation planning requirements and techniques, introduction to design of highways, airports and railroads and introduction to traffic engineering.
- 380 ENGINEERING MATERIALS LABORATORY** 2 credits  
Prerequisite: 202. Study of laboratory instrumentation and standard techniques in testing of engineering materials. Data analysis.
- 401 STEEL DESIGN** 3 credits  
Prerequisite: 306. Tension, compression members; openweb joists; beams; bearing plates; beam-columns; bolted, welded connections.
- 403 REINFORCED CONCRETE DESIGN** 3 credits  
Prerequisite: 306. Ultimate strength analysis and design; compression steel; diagonal tension; stirrups; development length; one-way slab; T-beams; two-way slabs; columns; isolated and combined footings.
- 404 ADVANCED STRUCTURAL DESIGN** 3 credits  
Prerequisites: 401, 403. Composite design; plate girders; plastic design; cantilever retaining walls; torsion in R/C members; deflection of R/C members; continuous girder bridge design.
- 407 ADVANCED STRUCTURAL ANALYSIS** 3 credits  
Prerequisite: 306. Energy methods for beams and frames. Stiffness and flexibility formulations for framed structures using classical and matrix methods. Introduction to stability and plastic analysis. Warping-Torsion behavior of beams. Analysis of axisymmetric circular plates and membrane shells.
- 414/514 DESIGN OF EARTH STRUCTURES** 3 credits  
Prerequisite: 314 or permission. Design of earth structures: dams, highway fills, cofferdams, etc. Embankment construction techniques, quality control, embankment analysis, instrumentation, foundation soil stabilization, seepage analysis and control. Design problem. Graduate students will perform more advanced analysis and design.
- 418/518 SOIL AND ROCK EXPLORATION** 3 credits  
Prerequisite: 314 or permission. Site exploration criteria and planning. Conventional boring, sampling and in situ testing methods. Theory and application of geophysics and geophysical methods including seismic, electrical resistivity, gravity, magnetic and radioactive measurements. Air photo interpretation.
- 423 CHEMISTRY FOR ENVIRONMENTAL ENGINEERS** 3 credits  
Prerequisite: One year of college chemistry. General, physical, organic biochemistry, equilibrium, and colloid chemistry concepts applied to Environmental Engineering. Concepts are used in water and wastewater laboratory.
- 424 WATER-WASTEWATER LABORATORY** 1 credit  
Corequisite: 323 or permission. Analysis of water and wastewater.
- 426/526 ENVIRONMENTAL ENGINEERING DESIGN** 3 credits  
Prerequisite: 323. An introduction to the physical, chemical and biological processes utilized in the treatment of water and wastewater, with design parameters emphasized.
- 427/527 WATER QUALITY MODELING AND MANAGEMENT** 3 credits  
Prerequisite: 323. Analysis and simulation of the physical, chemical and biochemical processes affecting stream quality. Development of management strategies based upon the application of water quality modeling techniques to environmental systems.
- 428/528 HAZARDOUS AND SOLID WASTES** 3 credits  
Prerequisite: senior standing or permission of instructor. Hazardous and solid waste quantities, properties and sources are presented. Handling, processing, storage and disposal methods are discussed with non-technical constraints outlined.
- 441 HYDRAULIC DESIGN** 3 credits  
Prerequisite: 341. Collection and critical evaluation of hydraulic data related to actual design problem selected by instructor. Development and analysis of design alternatives. Preparation of reports.
- 443/543 APPLIED HYDRAULICS** 3 credits  
Prerequisite: 341. Review of design principles: urban hydraulics, steam channel mechanics, sedimentation, coastal engineering.
- 445 HYDROLOGY** 3 credits  
Prerequisite: 341. Surface water hydrology, water cycle, precipitation, evaporation, stream flow. Principles of hydrologic systems and their analysis. Hydrologic simulation, reservoir planning and water supply studies. Analysis of rainfall and floods.
- 448 HYDRAULICS LABORATORY** 1 credit  
Prerequisite: 341. Introduction to laboratory and field devices for hydraulic measurements. Reduction and presentation of hydraulic data. Individual assignments of model studies of hydraulic structures.
- 450 URBAN PLANNING** 2 credits  
Historical developments in urban planning; urban planning techniques and patterns; comprehensive master planning studies; planning regulations; design problems; class projects; class project presentation.
- 451/551 COMPUTER METHODS OF STRUCTURAL ANALYSIS** 3 credits  
Prerequisite: 306. Computer methods of structural analysis. Finite element software and interactive graphics. Stiffness concepts and matrix formulation of beams; modeling of simple and complex structural systems; vibration analysis using microcomputers.
- 452 STRUCTURAL VIBRATIONS AND EARTHQUAKES** 3 credits  
Prerequisite: 306. Vibration and dynamic analysis of structural systems with one, two, or more degrees of freedom; beams, frames, buildings and bridges. Numerical methods of analysis. Elastic-plastic systems. Earthquake analysis of design. Earthquake codes.
- 453/553 OPTIMUM STRUCTURAL DESIGN** 3 credits  
Prerequisite: 306. Basic concepts in structural optimization. Mathematical programming methods including unconstrained minimization, multidimensional minimization and constrained minimization.
- 454/554 ADVANCED MECHANICS OF MATERIALS** 3 credits  
Prerequisite: 202 or equivalent. Three-dimensional state of stress and strain analysis. Unsymmetric bending of straight and curved members with shear deformation. Beams on elastic foundations. Saint Venant's torsional problems. Inelastic analysis of bending and torsional members. Introduction to energy method. Instability behavior of prismatic members.
- 463/563 TRANSPORTATION PLANNING** 3 credits  
Prerequisite: 361. Theory and techniques for development, analysis and evaluation of transportation system plans. Emphasis on understanding and using tools and professional methods available to solve transportation planning problems, especially in urban areas.
- 464/564 HIGHWAY DESIGN** 3 credits  
Prerequisite: 361. Study of modern design of geometrical and pavement features of highways. Design problem and computer use. Graduate students will produce a more complete design.
- 465/565 PAVEMENT ENGINEERING** 3 credits  
Prerequisite: 361. Theories of elasticity, of viscoelasticity and of layered systems as applied to pavements. Pavement materials characterization; pavement design, pavement restoration for rigid and flexible pavements.
- 466/566 TRAFFIC ENGINEERING** 3 credits  
Prerequisite: 361. Vehicle and urban travel characteristics, traffic flow theory, traffic studies, accidents and safety, traffic signs and marking, traffic signal planning, traffic control and transportation administration.
- 468/568 HIGHWAY MATERIALS** 3 credits  
Prerequisites: 361, 380 or permission. Properties of aggregates, manufacture and properties of portland cement concrete, properties of asphaltic materials, design and testing of hot mix asphalt pavement mixes and of surface treatments. Laboratory preparation of specimens and determination of properties. Graduate student requirement: Graduate students will be required to perform an additional eight-hour asphalt laboratory (Abson recovery of asphalt from solution) and to prepare a paper on a highway materials topic.
- 471 CONSTRUCTION ADMINISTRATION** 3 credits  
Prerequisite: senior standing or permission. Organization for construction, construction contracts, estimating, bidding, bonds and insurance. Construction financial management and supervision of construction, scheduling using critical path method.
- 472 CONSTRUCTION ENGINEERING** 3 credits  
Prerequisite: senior standing or permission. Construction equipment selection and management. Techniques of various engineering construction operations including blasting, tunnelling, concrete framework and dewatering.
- 473 CONSTRUCTION MATERIALS** 2 credits  
Prerequisites: 380, 4200:305. Composition, structure and mechanical behavior of structural materials such as concrete, wood, masonry, plastics and composite materials. Discussion of applications and principles of evaluating material properties.
- 474/574 UNDERGROUND CONSTRUCTION** 2 credits  
Prerequisite: 314. Description of practices and techniques of underground construction. Selection of proper method for individual job. Design of underground openings, support systems and linings.
- 480 RELIABILITY-BASED DESIGN** 3 credits  
Prerequisite: 3470:261 and senior standing. Probability concepts in civil engineering. Risk analysis and reliability based design.
- 481 CIVIL ENGINEERING SYSTEMS** 2 credits  
Prerequisite: senior standing. Systems approach to civil engineering problems. Mathematical programming; project planning, scheduling and cost analysis; basic operations research methods; decision analysis. Management of engineering design of complex civil engineering projects.

- 482 SPECIAL PROJECTS** 1-3 credits  
Prerequisites: senior standing and permission. Directed individual or group research or study in student's field of interest. Topic subject to approval by adviser.
- 487 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual creative project or design relevant to civil engineering, supervised by faculty member of the department.

## ELECTRICAL ENGINEERING

### 4400:

- 231 CIRCUITS I** 3 credits  
Prerequisite: 3650:291; corequisite: 3450:223. Fundamentals of circuit analysis including loop and nodal methods, phasor techniques, resonance, polyphase circuits and magnetic coupling
- 232 CIRCUITS II** 3 credits  
Prerequisite: 231; corequisite: 3450:235. Network theorems, Fourier methods, transfer functions. Laplace and Fourier transforms and their use in analyzing dynamic operation of circuits.
- 243 SIGNAL ANALYSIS** 3 credits  
Prerequisite: 231. Corequisite: 3450:235. Basic concepts of convolution, impulse and step responses, Laplace transforms, Fourier series, Fourier transforms, Bode diagrams, difference and differential equations.
- 320 BASIC ELECTRICAL ENGINEERING** 4 credits  
Prerequisite: junior standing in engineering; corequisite: 3450:235. Covers fundamental aspects of electrical circuits, electronics and electrical machinery. Not open to an electrical engineering major.
- 333 DISCRETE-TIME SYSTEMS** 3 credits  
Prerequisite: 232, 243, 4450:208. Introduction to the analysis and design of discrete-time linear systems. System simulations, classical solutions, Z-transform solutions, convolution techniques, matrices, state-variable methods, and digital filters are included.
- 334 ACTIVE CIRCUITS** 3 credits  
Prerequisite: 333. Applications of operational amplifiers including bilinear transfer functions, scaling, cascade design, biquad circuits, lowpass, high pass, bandpass-filters, Butterworth and Chebyshev response, sensitivity, delay filters, frequency transformations, ladder design, simulated element design, leapfrog simulation and switched-capacitors.
- 340 ELECTRIC CIRCUITS LABORATORY** 1 credit  
Prerequisite: 231. To develop practical skills in electronic circuits. Experiments will involve analysis and measurement of circuits which will illustrate circuit theory concepts.
- 344 INSTRUMENTATION** 3 credits  
Prerequisites: 340, 362. Analysis and characteristics of transducers, indicating instruments and recorders used in electrical measurements.
- 353 ELECTROMAGNETICS I** 4 credits  
Prerequisite: 231, 3450:223 or permission. Vector analysis. Electrostatics: electrostatic field, scalar potential, dielectrics, boundary-value problems. Magnetostatics: magnetic circuits. Maxwell's equations: Faraday's law, time-harmonic fields. Introduction to plane waves.
- 354 ELECTROMAGNETICS II** 3 credits  
Theory and application of transmission lines: transient and steady-state waves. Plane EM waves: propagation, reflection, and refraction. Waveguides open and closed-boundary guiding structures.
- 360 PHYSICAL ELECTRONICS** 3 credits  
Prerequisite: 232. Corequisite: 363. PN junction, diffusion, tunneling, FET and BJT device physics, equivalent circuits for electronic devices, time and frequency analysis, biasing and logic families.
- 361 ELECTRONIC DESIGN** 4 credits  
Prerequisites: 333, 360. Power amplification, feedback, oscillators, linear integrated circuits, modulation and demodulation circuits.
- 363 SWITCHING AND LOGIC** 4 credits  
Prerequisites: 232, 340. Analysis of computer circuits. Introduction to use of Boolean algebra and mapping techniques in analyzing switching circuits. Sequential circuits.
- 365 MICROPROCESSOR SYSTEM** 3 credits  
Prerequisite: 363. Consideration of microcomputer hardware and software components. Microprocessor and peripheral devices. Instructions set of selected microprocessor. Introduction to microcomputer software.
- 371 CONTROL SYSTEMS I** 4 credits  
Prerequisite: 333. Introduction to servomechanisms and feedback. Modeling and response of feedback control systems. Stability of linear systems. Experiments include analog simulation and basic servomechanism.
- 380 ILLUMINATION** 2 credits  
Fundamentals of illumination and principles underlying specifications and design for adequate electrical lighting.
- 381 ENERGY CONVERSION** 3 credits  
Prerequisites: 231 and 353. Nonelectrical to electrical energy conversions and vice versa: thermal, chemical, solar. Fundamentals of electromechanical energy conversion. Principles of operation of transformers, commutator machines, induction and synchronous machines.
- 385 ENERGY CONVERSION LAB** 2 credits  
Prerequisite: 381. Theoretical background and practical skills in machines measurements. Steady and transient states in transformers and machines recording and analysis. External characteristics of sources.
- 387 ADVANCED MACHINERY** 3 credits  
Prerequisite: 386. d-q transformation. Reactance of synchronous machines. Parallel operation of transformers. Synchronous-induction motors. Machine saturation and harmonics.
- 391 PROBLEMS** 1-3 credits  
(May be taken more than once) Prerequisite: permission of department head. Select comprehensive problems, supervised discussions and computation periods.
- 421/521 ENGINEERING ECONOMY** 2-3 credits  
Prerequisites: 3250:244 and senior standing in engineering. Presents engineering economics as distinguished from classical economic theory.
- 446 ANALOG COMMUNICATION** 3 credits  
Prerequisites: 243, 333, 362. Introduction to analog communication systems; amplitude, frequency, phase modulation; modulators, demodulators; noise and signal-to-noise ratio calculation; sampling; pulse modulation.
- 447 RANDOM SIGNALS** 3 credits  
Prerequisite: 333. Applications of set theory, discrete and continuous sample spaces; probability, random variables, distribution functions, density functions, stochastic processes, random signals, system function, power spectrum and correlation functions.
- 449/549 DIGITAL COMMUNICATION** 3 credits  
Prerequisite: 445. Introduction to digital communication theory and systems; coding of analog and digital information; digital modulation techniques. Introduction to information theory.
- 462 INTRODUCTION TO LASERS** 3 credits  
Prerequisites: 333, 353. Introduction to basic concepts of maser (laser) action; emission processes and their roles in laser action; types of lasers; presentation of generalized operating criteria.
- 463/563 ANTENNA THEORY** 3 credits  
Prerequisite: 354. Theory of EM radiation. Wire antennas, arrays, receiving antennas, reciprocity. Integral equations for induced currents, self and mutual impedances. Equivalence principle, radiation from aperture antennas.
- 465/565 MICROWAVES** 4 credits  
Prerequisite: 354. Dynamic fields, Maxwell's equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.
- 461 PHYSICS OF ELECTRONIC DEVICES** 3 credits  
Prerequisites: 3650:301, 353, 362. Physics of semiconductors. Band theory, energy distribution and electron transport. P-n junctions. BJT and FET devices. Electron emission and ballistics, gaseous discharge, dielectric and magnetic materials. Device modeling.
- 464 PULSE ELECTRONICS** 4 credits  
Prerequisites: 333, 362. Waveshaping circuits, nonsinusoidal waveform generation and relaxation circuits. Pulse transformers. Application of pulse and switching circuits.
- 465/565 PROGRAMMABLE LOGIC** 3 credits  
Prerequisite: 363. Digital design with programmable devices. PLD and FPGA architectures. Logic design and technology mapping tools.
- 470 MICROPROCESSOR INTERFACING** 3 credits  
Prerequisites: 362, 363. Microprocessor structure, Bus Interface. Digital controller devices and their relationship to both the microcomputer and physical environment.
- 472/572 CONTROL SYSTEMS II** 4 credits  
Prerequisite: 371. State variable analysis, design of control systems. Discrete systems, analysis, digital computer control. Experiments include hybrid, AC control system, digital computer control.
- 480/580 SYMMETRICAL COMPONENTS** 3 credits  
Prerequisite: 381. Per unit method as applied to power system calculations. Fundamental principles of symmetrical components as applied to analysis of electrical circuits and machines.
- 481 MODERN POWER SYSTEMS** 3 credits  
Prerequisite: 381. Introduction to electricity utility load flow, faulty analysis, stability, surge protection and relaying.
- 482 INDUSTRIAL POWER SYSTEMS** 3 credits  
Prerequisite: 381. Introduction to industrial power systems. Local generation, power factor correction, conductor selection code requirements, coordination of protective devices.
- 483/583 POWER ELECTRONICS I** 3 credits  
Elements of power electronics circuits. Rectifiers, converters, inverters analysis and design.
- 464/584 POWER ELECTRONICS LABORATORY AND DESIGN PROJECT** 2 credits  
Prerequisite: 483/583 or equivalent. Experiments on different types of power electronic converters: AC/DC, DC/DC, DC/AC, and AC/AC. Design project to include design, simulation, building, and testing of a power electronic circuit.
- 485/585 ELECTRIC MOTOR DRIVES** 3 credits  
Prerequisite: 381. Application of electric machines, choice of motor for particular drive. Application of power semiconductor circuits in electric machinery.
- 487 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual creative project or design relevant to electrical engineering, supervised by faculty member of the department.
- 498/598 TOPICS IN ELECTRICAL ENGINEERING** 1-2 credits  
(May be taken more than once) Prerequisite: permission of department head. Special topics in electrical engineering.

# ENGINEERING COMPUTER SCIENCE

## 4450:

- 208 PROGRAMMING FOR ENGINEERS** 3 credits  
Prerequisite: 4100:101 or permission. Software design cycle. Introduction to computer organization and assemblers. Compared syntax and use of high level languages for systems software. Required for Electrical Engineering majors.
- 410 COMPUTER METHODS** 3 credits  
Prerequisites: 208 and senior standing. Numerical modeling for embedded scientific applications. Accuracy with fixed and floating point systems. Analysis of complexity. Distributed processing. Object-oriented packaging in C++.
- 420/520 OBJECT ORIENTED DESIGN** 3 credits  
Prerequisites: 208 or equivalent. Investigation of object-oriented design paradigm and the design implementation with the object-oriented programming language C++.
- 432 SYSTEM SIMULATION** 3 credits  
Prerequisite: 410. Simulation of continuous systems on a digital computer. Methods and tools for linear, nonlinear, and chaotic systems.
- 441 EXPERT SYSTEMS DESIGN AND DEVELOPMENT** 3 credits  
Prerequisite: Senior standing or permission. Introduction to the design and development of expert systems.
- 442 KNOWLEDGE ENGINEERING** 3 credits  
Prerequisite: 441 or equivalent. Study of knowledge acquisition and expert system project management.
- 470/570 INTEGRATED SYSTEM DESIGN** 3 credits  
Prerequisite for 470: 4400:465. Prerequisite for 570: 4400:565. Introduction to computer structures, design methods and development tools for VLSI systems. nMOS devices and fabrication. Processing and control design. Layout methods and tools. Design systems.
- 497/597 SPECIAL TOPICS: COMPUTER SCIENCE** 1-2 credits  
(May be taken more than once) Prerequisite: permission of department head. Special topics in computer engineering.

# MECHANICAL ENGINEERING

## 4600:

- 165 TOOLS FOR MECHANICAL ENGINEERING** 3 credits  
Personal computer DOS system, word processing, spreadsheet, computer-aided drafting, math calculating package, mechanical graphics, and introduction to mechanical engineering program and curriculum.
- 203 DYNAMICS** 3 credits  
Prerequisite: 4300:201. Kinematics and kinetics of particles and rigid bodies. Principles of work, energy, momentum and impulse.
- 300 THERMODYNAMICS I** 4 credits  
Prerequisites: 3450:221 and 3650:291. Basic concepts of thermodynamics. The pure substance, the system and first and second laws of thermodynamics. Entropy, availability, power cycles.
- 301 THERMODYNAMICS II** 3 credits  
Prerequisites: 300 and 310. Thermodynamics of state, gas mixtures and gas-vapor mixtures. Combustion. Thermodynamics of gas flow.
- 305 THERMAL SCIENCE** 2 credits  
Prerequisites: 3450:222 and 3650:291. Credit not allowed for both 300 and 305. Introduction to first and second laws of thermodynamics, perfect gas relationships, equations of state, cycle analysis. Introduction to conduction, convection and radiation heat transfer.
- 310 FLUID MECHANICS** 3 credits  
Prerequisite: 203. Properties and behavior of gases and liquids at rest and in motion. Energy equation. Flow in conduits. Forces on body submerged in moving fluid. Dimensional analysis and similitude.
- 315 HEAT TRANSFER** 3 credits  
Prerequisites: 165, 300, 310, or 3460:201. Fundamentals of heat transfer by conduction, convection and radiation.
- 321 KINEMATICS OF MACHINES** 3 credits  
Prerequisites: 165, 203. Displacements, velocities, accelerations and introduction to plan motion mechanisms. Introduction to design of gears, gear trains and cams.
- 336 ANALYSIS OF MECHANICAL COMPONENTS** 3 credits  
Prerequisites: 165, 4300:202. Analysis of stress and strain at a point. Mohr's circles, shear centers, elastic instability. Stresses in thick and thin cylinders. Fatigue analysis.
- 337 DESIGN OF MECHANICAL COMPONENTS** 3 credits  
Prerequisite: 336. Application of stress analysis to design of fasteners, welds, springs, ball bearings and gears. Introduction to journal bearings and lubrication. Component design projects.
- 340 SYSTEMS DYNAMICS AND RESPONSE** 3 credits  
Prerequisites: 203, 3450:235. A unified approach to modeling, analysis, response and stability of engineering systems: analog, digital and hybrid computer simulation of interdisciplinary engineering problems are included.
- 360 ENGINEERING ANALYSIS** 3 credits  
Prerequisite: 3450:235. Numerical methods of solution of mechanical engineering problems.
- 380 MECHANICAL METALLURGY** 2 credits  
Prerequisite: 336. Structures of common metallic materials and study of their macroscopic mechanical behavior. Phase changes and heat treatment. Theories of failure.
- 400/500 THERMAL SYSTEM COMPONENTS** 3 credits  
Prerequisites: 301, 310, 315. Performance analysis and design of basic components of thermal energy exchange and conversion systems. Components studied include heat exchangers, pumps, compressors, turbines and expansion engines.
- 401 DESIGN OF ENERGY SYSTEMS** 2 credits  
Prerequisites: 400, 460. Analysis and design of systems for energy exchange. Performance of energy system components and their integration into complex practical systems. Design project required.
- 410/510 HEATING AND AIR CONDITIONING** 3 credits  
Prerequisites: 301, 315. Thermodynamics of gas mixtures. Design and selection of air conditioning equipment. Control of gas mixtures, heating, cooling and humidity.
- 411/511 COMPRESSIBLE FLUID MECHANICS** 3 credits  
Prerequisites: 301, 310. Subsonic and supersonic flow in nozzles, diffusers and ducts. One-dimensional reactive gas dynamics. Prandtl-Meyer theory. Applications to design and analysis of compressors, turbines and propulsion devices.
- 412/512 FUNDAMENTALS OF FLIGHT** 3 credits  
Prerequisite: 310 or equivalent or permission of instructor. Introduction to basic aerodynamics, airplane performance, stability and control, astronautics and propulsion. Design considerations are emphasized.
- 413/513 INTRODUCTION TO AERODYNAMICS** 3 credits  
Introduction of aerodynamic concepts; includes conformal transformations, theory of thin airfoils, 2-dimensional airfoil theory, wings of finite span, lifting line theories, lumped vortex, vortex lattice, and panel methods.
- 414/514 INTRODUCTION TO AEROSPACE PROPULSION** 3 credits  
Introduction to propulsion systems currently used in aerospace fields; propulsion principles for turbojets, turbofans, ramjets, chemical rockets, and electrical rocket propulsion.
- 415/515 ENERGY CONVERSION** 3 credits  
Prerequisites: 301, 315. Topics from fields of internal combustion engines, cycle analysis, modern conversion devices.
- 416/516 HEAT TRANSFER PROCESSES** 3 credits  
Prerequisite: 315. Analysis, design of extended surfaces. Natural convection and mixed convection, combined modes of heat transfer and heat transfer with phase changes.
- 420 INTRODUCTION TO FINITE ELEMENT METHOD** 3 credits  
Prerequisite: 336. Introduction to matrix and finite element methods in mechanical engineering. Stiffness and flexibility formulations in both solid mechanics and thermal sciences. Basic finite element methods and its implementation. Application of existing software package. Pre- and post-processing using interactive computer graphics.
- 422/522 EXPERIMENTAL STRESS ANALYSIS I** 3 credits  
Prerequisite: 336 or 4300:202. Experimental methods of determining stress or strain: brittle lacquer, strain gages, photoelasticity.
- 430/530 MACHINE DYNAMICS** 3 credits  
Prerequisite: 321. Static and dynamic forces in machines, products of inertia, dynamic equivalence, flywheels. Balancing of rotating, reciprocating, cyclic plane motion. Computer simulation of transient mechanism dynamics, other topics in advanced dynamics.
- 431/531 FUNDAMENTALS OF MECHANICAL VIBRATIONS** 3 credits  
Prerequisites: 203 and 3450:235. Undamped and forced vibrations of systems having one or two degrees of freedom.
- 432/532 VEHICLE DYNAMICS** 3 credits  
Application of dynamic systems analysis techniques to road vehicles. Newtonian and Lagrangian methods. Tire/road interface. Ride characteristics, handling and stability. Digital simulation.
- 441/541 CONTROL SYSTEMS DESIGN** 3 credits  
Prerequisites: 315, 431, 340. Methods of feedback control design such as minimized error, root-locus, frequency domain. Compensation techniques. Multivariable and nonlinear design methods and computer-aided control design.
- 442/542 INDUSTRIAL AUTOMATIC CONTROL** 3 credits  
Prerequisite: 440 or equivalent. Operation of basic control mechanisms. Study of mechanical, hydraulic, pneumatic, fluidic control systems, including application areas. Tuning of control devices for optimum performance of system. Case studies on control applications from industry, e.g. boilers, furnaces, process heaters.
- 443/543 OPTIMIZATION METHODS IN MECHANICAL ENGINEERING** 3 credits  
Prerequisite: 360. Development and method of solution of optimization problems in mechanical engineering. The use of dynamic programming and operational research methods for optimization including computer utilization and applications.
- 444/544 ROBOT DESIGN, CONTROL AND APPLICATION** 3 credits  
Prerequisites: 321, 440 or equivalent. Robot design and control. Kinematic transformations, velocities and accelerations, path trajectories and dynamics, control and sensing in robotics. The automated factory with robot applications.
- 450/550 INTRODUCTION TO COMPUTATIONAL FLUID FLOW AND CONVECTION** 3 credits  
Prerequisites: 315, 360, or permission of instructor. Numerical modeling of fluid/thermal systems; numerical solution of the momentum and thermal boundary layer equations; flow simulation using advanced heat transfer/fluid/graphics packages.
- 460 CONCEPTS OF DESIGN** 3 credits  
Prerequisite: 337; corequisite: 400. Design process. Creativity and inventiveness. Tools of decision making, engineering economics, reliability, optimization. Case studies.

- 461 DESIGN OF MECHANICAL SYSTEMS** 2 credits  
Prerequisites: 321, 431, 460. Detailed mechanical design project and case studies.
- 462/562 PRESSURE VESSEL DESIGN** 3 credits  
Prerequisite: 336 or 4300:202. Introduction to modern pressure vessel technology. Topics include basic structural considerations, materials and their environment and design-construction features.
- 463/563 COMPUTER AIDED DESIGN AND MANUFACTURING** 3 credits  
The use of computer systems to assist in the creation, modification, analysis, or optimization of engineering designs, and to plan, manage, and control manufacturing plants.
- 463 MECHANICAL ENGINEERING MEASUREMENTS LABORATORY** 2 credits  
Prerequisites: 203, 300, 310. Development of methods to measure temperature, pressure, flow rate, viscosity and motion. Includes both lecture and laboratory experience and emphasizes calibration and accuracy of appropriate instruments.
- 464 MECHANICAL ENGINEERING LABORATORY** 2 credits  
Prerequisite: 483; corequisites: 315 and 431. Laboratory experiments in area of dynamics, vibrations, thermodynamics, fluids, heat transfer and controls.
- 486 SPECIAL TOPICS** 1-3 credits  
Prerequisite: permission. Brief description of current content to be announced in schedule of classes.
- 497 HONORS PROJECT** 1-2 credits  
Prerequisite: senior standing in Honors Program. Individual creative project in thermal science, mechanics or design relevant to mechanical engineering, supervised by faculty member of the department.
- 498 EXPERIMENTAL INVESTIGATION IN MECHANICAL ENGINEERING** 1-2 credits  
Individual independent laboratory investigations in areas relevant to mechanical engineering. Student suggests a project and makes appropriate arrangements with faculty for supervision.

## BIOMEDICAL ENGINEERING

### 4800:

- 409 INTRODUCTION TO BIOMEDICAL ENGINEERING RESEARCH** 3 credits  
Application of engineering principles to local area medical research. Includes biomaterials, orthopedics, artificial organs, biostereometrics, biometrics, biological signal and image analysis, biomechanics and computers in medicine.

## CONSTRUCTION TECHNOLOGY

### 4980:

- 351 CONSTRUCTION QUALITY CONTROL** 2 credits  
Prerequisites: 2980:237, 238 or permission. Overview of quality control concepts and techniques as related to the construction industry including the necessary statistical tools; exposes students to civil, mechanical and electrical inspection requirements.
- 352 FIELD MANAGEMENT** 2 credits  
Prerequisites: 2980:222, 245 or permission. Planning, scheduling and controlling of field work within time and cost constraints.
- 354 FOUNDATION CONSTRUCTION METHODS** 3 credits  
Prerequisite: 2980:234. Soil mechanics and soils exploration as related to construction. Foundation construction methods and practice in the interest of safety and suitable economy.
- 355 COMPUTER APPLICATIONS IN CONSTRUCTION** 3 credits  
Prerequisite: admission into the BCT program or permission of instructor. Focuses on realtime and batch programming of construction-oriented problems. Includes graphics, simulation, basic programming, flowcharting, hardware, software and management information applications.
- 356 SAFETY IN CONSTRUCTION** 2 credits  
The purpose of this course is to explain what creates hazards and why, and to suggest where to anticipate trouble in each phase of the work as it progresses.
- 357 CONSTRUCTION ADMINISTRATION** 2 credits  
Prerequisite: junior standing. Construction specification, office organization, preparation of construction documents, bidding, bonds. Construction management and supervision. Agreement and contracts.
- 358 ADVANCED ESTIMATING** 3 credits  
Prerequisite: 355 or permission of the instructor. This course focuses on estimating and bidding for public and private construction. Includes heavy/highway, industrial and building construction with microcomputers to facilitate bid price.
- 381 CONSTRUCTION FORMWORK** 3 credits  
Prerequisite: 2980:234 or permission. Introduction to design and construction of field structures. Emphasis on design and construction of formwork and temporary wood structures.
- 463 LEGAL ASPECTS OF CONSTRUCTION** 2 credits  
Study of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, insolvency, subsurface. Review of AIA standard contracts and construction industry rules of arbitration.
- 462 MECHANICAL SERVICE SYSTEMS** 3 credits  
Introduction to materials and equipment used in mechanical heating, ventilating, air conditioning, water and waste systems.
- 463 ELECTRICAL SERVICE SYSTEMS** 3 credits  
Introduction to materials and equipment in electrical and acoustical systems of buildings. Includes illumination, electrical sources, materials and distribution, acoustical problems and materials.
- 465 HEAVY CONSTRUCTION METHODS** 3 credits  
Prerequisite: 2980:232 or 4300:472. Management techniques in planning, estimating and directing heavy construction operations.
- 466 HYDRAULICS** 3 credits  
Prerequisite: 2020:233. Introduction to hydrology. Flow in closed conduits and open channels, distribution, systems, storage requirements and basic concepts of hydraulic structures. Basic concepts of seepage and working knowledge of pumps.
- 467 SPECIAL PROJECTS** 1-3 credits  
Prerequisites: senior standing and permission of instructor. Directed individual or group research or study in student's field of interest. Topic subject to approval by adviser.
- 468 CONSTRUCTION MANAGEMENT** 3 credits  
Prerequisites: senior-level standing, 352 and 357. Construction Management takes established construction practices, current technological advances and latest management methods and makes them into an efficient, smooth working system.
- 470 ADVANCED CONSTRUCTION GRAPHICS** 3 credits  
This course focuses on construction graphics through microbased CAD. Topics include micro-computer systems, digitizers, plotters, printers, menus, keyboard and mouse input, introduction and advanced techniques.

# College of Education

## COOPERATIVE EDUCATION

### 5000:

- 301 COOPERATIVE EDUCATION** 0 credits  
(May be repeated) For cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

## TEACHER EDUCATION CORE PROGRAM

### 5050:

- 210 CHARACTERISTICS OF LEARNERS** 3 credits  
Prerequisite: Completion of all College of Education admission requirements; Corequisite: 211. Describe cognitive, psychosocial, physical, language, and moral development of learners Pre-K through adult. Identifies learner needs, roles of teachers and schools in fostering optimal development.
- 211 TEACHING AND LEARNING STRATEGIES** 3 credits  
Prerequisite: Completion of all College of Education admission requirements; Corequisite: 210. From course content and activities, students will recognize, select, and practice various instructional models. Students will acquire and apply appropriate learning and motivational strategies.
- 310 INSTRUCTIONAL DESIGN** 3 credits  
Prerequisite: 210, 211; Corequisite: 311. Design and teach lessons using instructional models, strategies, and resources for students with different characteristics and design appropriate assessments to measure content mastery.
- 311 INSTRUCTIONAL RESOURCES** 3 credits  
Prerequisites: 210, 211; Corequisite: 310. Examines existing and developing media, technological, human and environmental resources as they relate to learning. Includes identifying, locating, evaluating, using, designing, and preparing educational resources.
- 320 DIVERSITY IN LEARNERS** 3 credits  
Prerequisites: 210, 211. Students learn to appreciate common core culture, the diversity in the student population and the democratic ideal of equal access to educational opportunity.
- 330 CLASSROOM MANAGEMENT** 3 credits  
Prerequisites: 210, 211. Content regarding effective organization of the classroom as well as procedures and models for mediation of student behaviors will be presented.
- 410 PROFESSIONAL ISSUES IN EDUCATION** 3 credits  
Prerequisites: 310, 311, 320, 330. Coursework applies social and philosophical foundations of education to current and historical issues in education with attention to roles and responsibilities of contemporary teachers.

## EDUCATIONAL FOUNDATIONS AND LEADERSHIP

### 5100:

- 258 SMALL GROUP INSTRUCTION** 1-3 credits  
(May be repeated for a total of three credits) Prerequisites: 250 and 3750:100 or equivalent and permission of instructor. Study of student-centered group leadership skills for facilitating classroom cognitive learning. Student exposed to basic literature related to student-centered style, trained in appropriate observational techniques and provided practice in leading small instructional groups.
- 320 LEARNING AND INDIVIDUALIZED INSTRUCTION** 2 credits  
Prerequisite: 250. Behavioral approach to learning and the management of students. Emphasizes design of instructional sequences using behavioral analysis of objectives in both cognitive and psychomotor domains.
- 412/512 DESIGN AND PRODUCTION OF INSTRUCTIONAL MATERIALS** 3 credits (20 clinical hours)  
Design, adaptation, and preparation of instructional materials using graphics, transparency production, video equipment, computer authoring software, mounting and laminating processes, photography, and other procedures.

- 414/514 ORGANIZING AND SUPERVISING EDUCATIONAL MEDIA PROGRAMS** 3 credits  
Prerequisite: 310 or permission of the instructor. Procedures for planning, organizing and evaluating educational media programs including media facilities and services.
- 420/520 INTRODUCTION TO INSTRUCTIONAL COMPUTING** 3 credits  
Examines use of wordprocessing, spread sheets, databases, graphics, telecommunications and authoring software in both educational and business settings and evaluates instructional and applications software.
- 430 SENIOR HONORS PROJECT: FOUNDATIONS** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 480 SPECIAL TOPICS: EDUCATIONAL FOUNDATIONS** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2/590,1,2 WORKSHOP** 1-3 credits each  
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
- 494/594 EDUCATIONAL INSTITUTES** 1-4 credits  
Special course designed as in-service upgrading programs.
- 497 INDEPENDENT STUDY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: permission of department head and instructor. Specific area of study determined in accordance with program and professional goals.

## ELEMENTARY EDUCATION

### 5200:

- 200 PRE-KINDERGARTEN PARTICIPATION I** 1 credit (30 field hours)  
Prerequisite: 7400:265, 2200:245. Planned field experience in a pre-kindergarten infant/toddler classroom where students work with children age birth to 3 years both individually and in small groups.
- 215 THE CHILD, THE FAMILY, AND THE SCHOOL** 2 credits (20 clinical/field hours)  
Prerequisite: 5050:210. Social, emotional, cognitive, physical, moral development of elementary and middle school children. Influence, interaction of home, family, peers, and school on the development of children.
- 220 VISUAL ARTS CULTURE IN THE ELEMENTARY SCHOOL** 1 credit  
Art education concepts, structures, and knowledge base to provide curricular opportunities for education majors to develop as creative problem solvers in an elementary school setting. First offered Fall 1993.
- 225 ELEMENTARY FIELD EXPERIENCE I** 2 credits  
Prerequisite: Student must be enrolled in or have completed 286 and 141. Planned field experience emphasizing field settings where the student works with small groups of children in an urban elementary classroom.
- 245 UNDERSTANDING LANGUAGE LITERACY** 3 credits  
Prerequisite: 5050:210. Children's language literacy learning is explored through an integrated instructional model focusing upon reading, writing, speaking, and listening development which incorporates use of children's literature.
- 250 DEVELOPING PROCESSES OF INVESTIGATION** 3 credits  
Prerequisites: 5050:210, 211. This course will enable students to identify and acquire those investigative and discovery processes and skills that are common in mathematics, science, and social studies.
- 286 CHILDREN'S LITERATURE** 3 credits (15 clinical hours)  
Survey of materials for children in prose, poetry and illustrations from early historical periods to modern types; criteria of selection and methods of presentation critically examined.
- 300 PRE-KINDERGARTEN PARTICIPATION II** 1 credit (30 field hours)  
Prerequisite: 200, 5610:450. Planned field experience in pre-kindergarten early intervention program where student works in both small and large group settings and with individual children.
- 310 INTRODUCTION TO EARLY CHILDHOOD EDUCATION** 3 credits (10 clinical hours)  
Prerequisite: 7400:265. Provides the student with background information on who is serviced, types of programs available, role of the adults and goals of early childhood education.
- 315 ISSUES AND TRENDS IN EARLY CHILDHOOD EDUCATION** 3 credits (10 clinical hours)  
Prerequisite: 7400:265. In-depth examination of issues impacting on children from birth to kindergarten, their families and the early childhood three educational process.
- 320 VISUAL ARTS APPLICATION IN THE ELEMENTARY SCHOOL** 3 credits  
Prerequisite: 5200:220. Exploration of materials, methods, processes and visual techniques relating two and three-dimensional art experiences for the teacher of elementary children.
- 325 ELEMENTARY FIELD EXPERIENCE II** 2 credits (50 field hours).  
Prerequisite: Student must be enrolled in or have completed 338, 333. Student must have successfully completed 225. Planned field experience emphasizing field settings where the student works with large groups of children in a suburban elementary classroom.
- 330 KINDERGARTEN POLICIES, ISSUES, AND TRENDS** 4 credits (20 clinical/field hours)  
Prerequisite: 7400:265. In-depth examination of policies, issues, and trends influencing kindergarten children, their families, and the kindergarten educational process.
- 331 KINDERGARTEN METHODS AND MATERIAL** 4 credits (20 clinical/field hours)  
Prerequisites: 330 and 7400:265. Scope and sequence of kindergarten curricula, with emphasis on developmentally appropriate methods and materials.

- 333 SCIENCE FOR THE ELEMENTARY GRADES** 3 credits  
Prerequisite: 5100:250. For a prospective elementary school science teacher. Development of a point of view toward science teaching and study of methods of presenting science material.
- 334 TEACHING ART IN THE ELEMENTARY SCHOOL** 3 credits  
Prerequisite: Admission to Teacher Education Program, Art K-12. Visual arts in elementary schools. Art education concepts with studio orientation including history of art education, developmental stages, curriculum and organization, methods, evaluation and research, and practical participation.
- 336 TEACHING OF ELEMENTARY SCHOOL MATHEMATICS I** 3 credits  
Prerequisite: 5100:250. Trends in instruction in elementary schools. Procedures for development of mathematical concepts and skills.
- 338 THE TEACHING OF SOCIAL STUDIES IN THE ELEMENTARY SCHOOL** 3 credits  
Prerequisite: 5050:210, 3350:100, one History requirement from General Studies. Social studies in elementary school and varied means of implementing program.
- 342 TEACHING ELEMENTARY SCHOOL MATHEMATICS** 4 credits  
Prerequisite: General college mathematics requirement. Trends in mathematics instruction in elementary schools. Procedures for the development of mathematics concepts and skills.
- 345 TEACHING LANGUAGE LITERACY** 4 credits  
Prerequisite: 5200:245. The teaching of language literacy is explored through an integrated instructional model. Strategies for teaching language literacy.
- 355 LANGUAGE AND LITERACY IN EARLY CHILDHOOD** 3 credits  
Prerequisite: 5200:310 and 7400:265. A framework for the development of literacy from birth to age 8. Factors influencing emerging literacy will be explored. Emphasis on young children's literature.
- 360 TEACHING IN THE NURSERY CENTER** 2 credits (10 clinical hours)  
Prerequisite: 310, 7400:280, 270, or permission of instructor; corequisite: 370. Assists students with the integration of knowledge, skills, attitudes and values learned in the pre-kindergarten program as they participate with young children.
- 365 COMPREHENSIVE MUSICIANSHIP FOR THE ELEMENTARY CLASSROOM TEACHER** 3 credits (25 clinical hours)  
Designed to afford a prospective classroom teacher the opportunity to develop individual musical skills in creativity, performance and listening as means of enhancing teaching through
- 370 NURSERY CENTER LABORATORY** 2 credits (53 clinical hours)  
Prerequisites: 310, 7400:280, 270 or permission of instructor. Corequisite: 360. Lab accompanies 360 and is an integrated practical experience in the University Nursery Center under the direction of experienced teachers.
- 395 FIELD EXPERIENCE** 1-3 credits  
Prerequisites: permission of adviser and department head. Independent field work in area selected by student's adviser, based on student's needs.
- 403 STUDENT TEACHING SEMINAR** 1 credit (15 clinical hours)  
Prerequisite: senior standing. In conjunction with Student Teaching. Synthesis of contemporary problems encountered during student teaching experience. Exchange of ideas regarding role of new teacher entering profession.
- 411/511 CREATIVE TECHNIQUES FOR EXPLORING CHILDREN'S LITERATURE** 2 credits  
Prerequisite: 286. Examination of techniques for interpretation of children's literature including storytelling, creative dramatics, reader's theatre and choral speaking.
- 425 ELEMENTARY FIELD EXPERIENCE III** 2 credits (50 field hours).  
Prerequisites: Student must be enrolled in or have completed 335, 336, 337. Student must have completed 325. Planned field experience emphasizing field settings where the teacher education student works with entire classes of children in an elementary or middle school setting.
- 430 SENIOR HONORS PROJECT: ELEMENTARY** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 435/535 ACTIVITIES TO INDIVIDUALIZE SOCIAL STUDIES** 2 credits  
Prerequisite: 338. Development of materials and activities (learning games, simulation games, simulations, learning stations, programmed field trips and map activities) to provide teacher with variety of techniques in order to develop an individualized, student-involved social studies program.
- 436/536 GEOMETRY AND MEASUREMENT IN ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Trends in geometry and measurement instruction in elementary school. Procedures for development of important geometric concepts and measurement skills.
- 437/537 STRUCTURE OF THE NUMBER SYSTEM IN ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Applied and advanced topics in mathematics education in elementary school. Thorough investigation of number system presently being taught in elementary school.
- 438/538 MATERIALS AND LABORATORY TECHNIQUES IN ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Applied mathematics. Construction and application of mathematical models. Procedures for development of important mathematical concepts through the laboratory approach.
- 439/539 PROPERTIES OF NUMBERS IN ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Investigation of those number properties that help explain how laws of arithmetic work. Procedures for development of important arithmetic concepts and computational skills.
- 440/540 CONTEMPORARY ELEMENTARY SCHOOL SCIENCE PROGRAMS** 2 credits  
Prerequisite: 333. Contemporary elementary science programs critically analyzed and their procedure developed and implemented in University classroom.

- 451 ELEMENTARY EDUCATION** 3 credits  
Evaluation of recent trends and practices in elementary education. Required for those converting from other certificates.
- 480 SPECIAL TOPICS: ELEMENTARY EDUCATION** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2,3/590,1,2,3 WORKSHOP** 1-3 credits each  
Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.
- 494/594 EDUCATIONAL INSTITUTES** 1-4 credits  
Special courses designed as in-service upgrading programs. Frequently provided with the support of national foundations.
- 495 STUDENT TEACHING** 4-8 credits (322 field hours)  
Prerequisites: senior standing and 300. Planned teaching experience (in elementary school) selected and supervised by Office of Educational Field Experience.
- 496 STUDENT TEACHING** 1-6 credits  
The capstone field experience for elementary education majors. Students will have two classroom experiences one primary level and one intermediate level.
- 497 INDEPENDENT STUDY** 1-3 credits  
Prerequisites: permission of adviser and department head. Specific area of curriculum investigation pertinent to elementary education as determined by student's academic needs.

## READING

### 5250:

- 341 LABORATORY PRACTICUM IN READING** 3 credits  
Prerequisite: 5200:339. Laboratory experience with classroom, small groups and individual situations. A student diagnoses, implements procedures and follows prescribed reading improvement practices.
- 411/511 MATERIALS AND ORGANIZATIONS FOR READING INSTRUCTION** 3 credits  
Prerequisite: 5200:339. Professional problems of selection and evaluation of reading materials and classroom organizations explored.
- 440/540 DEVELOPMENTAL READING IN THE CONTENT AREAS ELEMENTARY** 3 credits  
Prerequisite: 5200:337 or permission of instructor. Nature of reading skills relating to content subjects. Methods and materials needed to promote reading achievement in content subjects by the elementary classroom teacher.
- 441/541 LANGUAGE AND ITS RELATIONSHIP TO READING IN THE ELEMENTARY SCHOOL** 3 credits  
Prerequisite: 5200:337 or permission of the instructor. An overview of the linguistic field in the teaching of reading in the elementary school. A discussion of major linguistic principles for classroom application in grades K-8.
- 442/542 TEACHING READING TO CULTURALLY DIFFERENT LEARNERS** 3 credits  
Prerequisite: 5200:337 or by permission of the instructor. The course is designed to provide a student with knowledge, skills and attitudes which will enable employment of effective methods of teaching reading to culturally different learners, and/or learners whose language patterns are nonstandard.
- 480 SPECIAL TOPICS: ELEMENTARY READING INSTRUCTION** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

## SECONDARY EDUCATION

### 5300:

- 311 INSTRUCTIONAL TECHNIQUES IN SECONDARY EDUCATION** 5 credits (30 clinical hours, 20 field hours)  
Prerequisites: 5050:210, 211, 310, 311, 320, and 330. Corequisite: 5300:375. Open to student who has completed certification requirements in all content fields. Techniques of planning, instruction and evaluation in various secondary teaching fields.
- 316 METHODS IN TEACHING ART** 3 credits  
Prerequisites: completion of required course for art teachers and grade-point average of 2.50 in the field. Study of trends and procedures in teaching and supervision; relation of art to home, school and community; observation in selected schools required.
- 321 JUNIOR HIGH AND MIDDLE SCHOOL EDUCATION** 2 credits  
Designed to provide student with knowledge and understanding of junior high and middle school education with ability to interpret it to other educators, parents and pupils.
- 325 CONTENT READING IN SECONDARY SCHOOLS** 3 credits (30 clinical hours)  
Instructional principles and practices for helping secondary school youth and adults learn subject matter through application of reading and study skills.
- 330 TEACHING OF ADOLESCENT LITERATURE** 3 credits  
Prerequisite: permission of adviser. Student develops skills for selection of literature that is well suited for secondary student. Student develops, uses and experiences methods for teaching adolescent literature in secondary schools.

- 374 PRINCIPLES OF SHORTHAND INSTRUCTION** 2 credits  
Prerequisites: 2540:173 and grade-point average of 2.50 in the field. Methods of presentation in shorthand and transcription. Demonstration and observations required. Theory test in the field must be passed before credit given for course.
- 375 EXPLORATORY EXPERIENCE IN SECONDARY EDUCATION** 1 credit (6 clinical hours, 30 field hours)  
Corequisite: 311. Field work with secondary school pupils, teachers and other school personnel.
- 396 FIELD EXPERIENCE** 1-3 credits  
Prerequisite: upper-college standing. Supervised work with youngsters, individually and in groups in school and/or community settings.
- 425/525 ADVANCED MICROCOMPUTER APPLICATIONS IN THE SECONDARY SCHOOLS** 3 credits (30 clinical hours)  
Course prepares teachers to evaluate hardware and software, discuss the potential, limitations, and problems of computers, and develop curriculum applications of the microcomputer in subject area and computer literacy courses. Research will be utilized in planning effective applications.
- 430 SENIOR HONORS PROJECT: SECONDARY** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 435/535 CONCEPTS AND CURRICULUM DESIGNS IN ECONOMIC EDUCATION** 3 credits  
Economic education concepts appropriate for grade levels K-12 and adult education courses. Economic education materials developed to teach the concepts utilized.
- 445 MICROCOMPUTER LITERACY FOR SECONDARY TEACHERS** 2 credits (30 clinical hours)  
Prerequisite: senior status. Focus is on developing student competence in the use of education computer technology to enhance both the teacher's personal and professional productivity.
- 475/675 VOCATIONAL BUSINESS EDUCATION** 3 credits  
Prerequisite: senior status or permission. Principles of program construction, organization, implementation, evaluation, improvement, and development of program guides for both intensive and cooperative vocational business education.
- 490 SPECIAL TOPICS: SECONDARY EDUCATION** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2,3/590,1,2,3 WORKSHOP** 1-3 credits each  
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
- 494/594 EDUCATIONAL INSTITUTES** 1-4 credits  
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
- 495 STUDENT TEACHING** 8-11 credits  
Prerequisites: Senior status and permission of instructor. Directed teaching under supervision of directing teacher and University supervisor.
- 496 STUDENT TEACHING COLLOQUIUM** 1 credit  
Concurrent with Student Teaching; emphasis on applied decision making, group problem solving, and commitment to life-long learning.

## TECHNICAL AND VOCATIONAL EDUCATION 5400:

- 301 OCCUPATIONAL EMPLOYMENT EXPERIENCE AND SEMINAR** 1-4 credits  
Provides student with knowledge of current industrial or business practice at level minimally commensurate with that associated with employment expectations of graduates of technical programs.
- 351 CONSUMER HOMEMAKING METHODS** 4 credits  
Prerequisites: senior standing, enrolled in student teaching. Organization of home economics in secondary schools. Emphasis on methodology, techniques, development of vocational concepts, utilization of audio-visual materials, evaluation procedures.
- 396 FIELD EXPERIENCE** 1-3 credits  
Prerequisite: upper-college standing. Supervised work with youngsters, individually and in groups in educational institutions, training and/or community settings.
- 400/500 THE POSTSECONDARY OCCUPATIONAL LEARNER** 3 credits  
Describes the postsecondary occupational learner; studies issues, factors, and strategies pertinent to successful facilitation of learning in a variety of postsecondary occupational learning environments.
- 403 TECHNICAL EDUCATION PRACTICUM SEMINAR** 2 credits  
Prerequisites: 430, 431 and 435. Corequisite: 495.
- 405/505 OCCUPATIONAL EDUCATION FOR YOUTH AND ADULTS** 3 credits  
History and operations of current vocational education for youth and adults. Includes study of social, economic and political influences that stimulate growth and expansion of vocational education.
- 410/510 THE TWO-YEAR COLLEGE** 3 credits  
Designed to introduce student to nature, purpose and philosophy of the two-year college. Includes examination of types of institutions offering two-year programs.
- 415/515 TRAINING IN BUSINESS AND INDUSTRY** 3 credits  
Examines the role and mission of the training function in the modern industrial setting. Provides a foundation for a student planning to become an industrial trainer or training supervisor of technicians and other occupational skill-development levels.
- 420 INSTRUCTIONAL TECHNOLOGIES FOR TECHNICAL EDUCATION/TRAINING** 3 credits  
Experiences in planning, preparing, producing, and evaluation instructional techniques used in a variety of postsecondary occupational education and training environments.
- 430/530 CURRICULUM DEVELOPMENT FOR TECHNICAL EDUCATION** 2 credits  
Prerequisite: Admission to Technical Education Program. Corequisite: 431. Procedure of breaking down an occupation to determine curriculum for laboratory and classroom, developing this content into an organized sequence of instructional units.
- 431/531 CURRICULUM DEVELOPMENT LABORATORY** 1 credit  
Prerequisite: Admission to Technical Education Program. Corequisite: 430.
- 435/535 INSTRUCTIONAL TECHNIQUES IN TECHNICAL EDUCATION** 4 credits  
Prerequisites: 430/530, 431/531. Selected topics in instructional techniques appropriate in post-secondary technical education. Emphasis on instructional methods, techniques in classroom, laboratory including tests, measurements.
- 440/661 LIFE-SPAN AND COMMUNITY EDUCATION** 2 credits  
Designed for a person engaged in providing educational services in the community. Includes examination of community education concepts and roles of various personnel and agencies.
- 441/541 EDUCATIONAL GERONTOLOGY SEMINAR** 3 credits  
Designed for person practicing in field of gerontology or preparing for a specialization in educational gerontology, including person responsible for development and implementation of courses, seminars, occupational training programs and workshops for older people.
- 451/551 HOME ECONOMICS JOB TRAINING** 3 credits  
Prerequisite: senior standing or permission of instructor. Concept development in vocational home economics. Job training, program development, operational procedures, skill and knowledge identification, training profiles, job description and analysis. Individualized study guides. In-school and on-the-job observations.
- 490 SPECIAL TOPICS: VOCATIONAL EDUCATION** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2/590,1,2 WORKSHOP** 1-3 credits each  
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
- 494/594 EDUCATIONAL INSTITUTES** 1-4 credits  
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
- 495 TECHNICAL EDUCATION PRACTICUM** 1-4 credits  
Prerequisites: 410, 430, 435, or equivalent and permission of adviser; corequisite: 403. Directed teaching under supervision of directing teacher and University supervisor.
- 497 INDEPENDENT STUDY** 1-3 credits  
Prerequisites: permission of adviser and supervisor of independent study. Area of study determined by student's need.

# PHYSICAL EDUCATION

## 5540:

### 120-83 PHYSICAL EDUCATION

0.5 credit each

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. One-half credit courses are offered one-half semester. Permission of coach necessary for enrollment in varsity sports(170-181).\*\*

120 ARCHERY	145 SQUASH RACQUETS
121 BADMINTON	146 SWIMMING (beginning)
122 BASKETBALL	147 SWIMMING (intermediate)
123 BOWLING	148 SWIMMING (advanced)
124 CANOEING	149 TEAM HANDBALL
125 DIVING	150 TENNIS (beginning)
126 FITNESS AND WELLNESS†	151 VOLLEYBALL
127 GOLF	152 WATER POLO
128 GYMNASTICS (apparatus)	153 WATER SAFETY‡
129 GYMNASTICS (tumbling)	154 WRESTLING
130 HANDBALL	155 BASIC KAYAKING‡
131 INDOOR SOCCER	170 VARSITY BASEBALL
132 KARATE‡	171 VARSITY BASKETBALL
133 LIFE GUARD TRAINING‡	172 VARSITY CROSS COUNTRY
134 MODERN DANCE	173 VARSITY FOOTBALL
135 RACQUETBALL	174 VARSITY GOLF
136 RUGBY	175 VARSITY SOCCER
137 SAILING	176 VARSITY SOFTBALL
138 SCUBA	177 VARSITY SWIMMING
139 SELF DEFENSE‡	178 VARSITY TENNIS
140 SKIING (cross country)	179 VARSITY TRACK
141 SKIING (downhill)	180 VARSITY WRESTLING
142 SOCCER	181 VARSITY VOLLEYBALL
143 SOCIAL DANCE	182 VARSITY RIFLERY
144 SQUARE AND FOLK DANCE	183 VARSITY CHEERLEADING

### 190 SPECIAL TOPICS: GENERAL EDUCATION PHYSICAL EDUCATION

5-2 credits

Weight training, self defense for the blind, water safety instruction, beginning yoga, billiards, intermediate and advanced bowling, intermediate and advanced golf, advanced self defense..

# PHYSICAL EDUCATION

## 5550:

### 102 PHYSICAL EDUCATION ACTIVITIES I:

2 credits (30 clinical hours)

#### FITNESS AND CONTEMPORARY ACTIVITIES

Presentation of knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of fitness and contemporary activities. One hour lecture, two hours lab.

### 130 PHYSICAL EDUCATION ACTIVITIES FOR ELEMENTARY SCHOOL CHILDREN

2 credits (30 clinical hours)

For a physical education majors only. Participation in play activities commonly used in elementary physical education programs. One lecture and two laboratory periods per week.

### 150 CONCEPTS IN HEALTH AND FITNESS

3 credits

Introduction to basic health and fitness concepts and related topics. Attention will be given to individual fitness programs emphasizing such topics as aerobic and anaerobic exercises, nutrition, diet, stress, and assessment methods and procedures.

### 193 ORIENTATION TO TEACHING PHYSICAL EDUCATION

3 credits (10 field hours, 22 clinical hours)

Investigation of teaching elementary, middle school, secondary physical education. Teacher concerns such as lesson planning are considered. Observations done in school settings. Three hours lecture.

### 194 SPORTS OFFICIATING

2 credits (8 clinical hours)

Knowledge of rules for interscholastic sports and officiating techniques. Successful completion of course permits taking of state examination for officiating. Two lectures and one laboratory per week.

### 195 CONCEPTS OF GAMES AND PLAY

2 credits (10 clinical hours)

Concept analysis of games and play and application of these concepts to the teaching/learning process in physical education. Two hours lecture.

### 201 KINESIOLOGY

3 credits (8 clinical hours)

Prerequisites: 3100:206/207 or 3100:208/209. Application of basic principles of anatomy and mechanics to human movement. Three hours lecture with practical application and demonstrations.

### 202 DIAGNOSIS OF MOTOR SKILLS

2 credits (30 clinical hours)

Prerequisite: 5550:201. This course introduces physical education majors to the sciences of diagnosing motor skills. One hour lecture, two hours lab.

### 203 MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

3 credits (20 clinical hours)

Statistical procedures needed for analysis and interpretation of tests. Evaluation procedures, testing instruments, and techniques for administering tests are discussed and practiced. Three hours lecture.

### 204 PHYSICAL EDUCATION ACTIVITIES II: SOCCER AND SWIMMING

2 credits (30 clinical hours)

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of soccer and swimming. One hour lecture, two hours lab.

### 205 PHYSICAL EDUCATION ACTIVITIES III: BASKETBALL AND TRACK/FIELD

2 credits (30 clinical hours)

Course presents knowledge, fundamental skill development, and psychomotor skill analysis relative to areas of basketball and track and field. One hour lecture, two hours lab.

### 211 FIRST AID AND CARDIOPULMONARY RESUSCITATION

2 credits (15 clinical hours)

Based on American Red Cross standards for first aid and cardiopulmonary resuscitation. Instruction and skills practice for sudden illness/emergencies is provided. Two hours lecture.

### 235 CONCEPTS OF MOTOR LEARNING AND DEVELOPMENT

3 credits (10 field hours, 10 clinical hours)

This course will introduce key motor learning concepts and analysis of developing fundamental motor skills. Three hours lecture.

### 240 CARE AND PREVENTION OF ATHLETIC INJURIES

3 credits (15 clinical hours)

Prerequisites: 3100:206/207 or 3100:208/209. Discussion of prevention, immediate care and rehabilitation of common athletic injuries. Practical application of wrapping and taping procedures for injury prevention and post-injury support.

### 245 ADAPTED PHYSICAL EDUCATION

3 credits (30 clinical hours, 10 field hours)

Identification of atypical movement among various exceptional individuals, with adapted physical education programming experience in a laboratory setting. Two hours lecture and two hours lab.

### 300 PHYSIOLOGY OF EXERCISE FOR THE ADULT AND ELDERLY\*

2 credits

Analysis of physiological effects of exercise on elderly. Exercise programs adaptable for use by persons working with elderly. Two hours lecture.

### 302 PHYSIOLOGY OF EXERCISE\*

3 credits (30 clinical hours)

Prerequisites: 3100:206/207 or 3100:208/209. A course designed to study the physiological effects of exercise relative to physical education activities, athletics and athletic training. Two hours lecture, two hours laboratory.

### 306 PHYSICAL EDUCATION ACTIVITIES IV\* BADMINTON AND GOLF

2 credits (30 clinical hours)

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of badminton and golf. One hour lecture, two hours lab.

### 307 PHYSICAL EDUCATION ACTIVITIES V\* TENNIS AND VOLLEYBALL

2 credits (30 clinical hours)

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of tennis and volleyball. One hour lecture, two hours lab.

### 308 PHYSICAL EDUCATION ACTIVITIES VI\* DANCE AND TUMBLING

2 credits (30 clinical hours)

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of dance and tumbling. One hour lecture, two hours lab.

### 310 THEORY AND TECHNIQUES OF SOCCER\*

1 credit (20 clinical hours)

Theory, techniques and organizational procedures for coaching of soccer. Two class periods per week.

### 311 THEORY AND TECHNIQUES OF TRACK AND FIELD\*

1 credit (20 clinical hours)

Theory, techniques and organizational procedures for coaching of track and field. Two class periods per week.

### 312 THEORY AND TECHNIQUES OF BASKETBALL\*

1 credit (20 clinical hours)

Theory, techniques and organizational procedures for coaching of basketball. Two class periods per week.

### 313 THEORY AND TECHNIQUES OF BASEBALL/SOFTBALL\*

1 credit (20 clinical hours)

Theory, techniques and organizational procedures for coaching of baseball and softball. Two class periods per week.

### 320 THEORY AND TECHNIQUES OF VOLLEYBALL\*

1 credit (20 clinical hours)

Theory, techniques and organizational procedures for coaching of volleyball. Two class periods per week.

### 325 THEORY AND TECHNIQUES OF FOOTBALL\*

1 credit (20 clinical hours)

Theory, techniques and organizational procedures for coaching of football. Two class periods per week.

### 334 GAMES AND RHYTHMS FOR ELEMENTARY SCHOOL CHILDREN

3 credits (30 clinical hours, 5 field hours)

Emphasis is on acquisition and development of fundamental motor skills, rhythmic movements, and physical fitness among elementary school children. Two hours lecture, two hours lab.

### 335 MOVEMENT EXPERIENCES FOR ELEMENTARY SCHOOL CHILDREN\*

3 credits (20 clinical hours, 10 field hours)

Prerequisites: 130, 193, 235, and 245. Course focuses on use of fundamental motor skill analysis to structure movement lesson planning and implementation for school settings. One hour lecture, two hours lab.

### 336 MOTOR LEARNING AND DEVELOPMENT FOR EARLY CHILDHOOD\*

2 credits (10 field hours)

Physical fitness, fundamental motor skills, motor development and learning for early childhood, birth to age eight. Creating an environment of motor experiences for young children.

\*\* Varsity sports are one credit each.

‡ One credit each. Two periods each week.

\* Students must be in the College of Education to take 300/400 level courses.

- 345 INSTRUCTIONAL TECHNIQUES IN ELEMENTARY PHYSICAL EDUCATION\*** 3 credits (30 clinical hours)  
Prerequisites: 130 and 193. Microteaching experience with the purpose being to improve pre-service instructional skills for effective teaching of elementary physical education. Two hours lecture, two hours lab.
- 346 INSTRUCTIONAL TECHNIQUES IN SECONDARY PHYSICAL EDUCATION\*** 3 credits (30 clinical hours)  
Prerequisites: 102, 193 and 204/205. Presentation of various teaching styles/skills/behaviors for effective teaching of secondary physical education via microteaching. Two hours lecture, two hours lab.
- 395 FIELD EXPERIENCE\*** 1-3 credits (30-90 field hours)  
Prerequisite: permission of adviser. Practical experience in an area related to physical education under supervision of faculty member. Student works with current physical education programs in schools.
- 430 SENIOR HONORS PROJECT: PHYSICAL EDUCATION\*** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 436/636 FOUNDATIONS AND ELEMENTS OF ADAPTED PHYSICAL EDUCATION\*** 3 credits  
Principles, components, and strategies necessary in providing motor activities for handicapped students via application of a neurodevelopmental model and alternate methods. Three hours lecture.
- 441/541 ADVANCED ATHLETIC INJURY MANAGEMENT\*** 4 credits (30 clinical hours)  
Prerequisites: 3100:206/207 or 3100:208/209, 5550:240, suggested sequence, 5550:201, 302. Advanced athletic training techniques for the student desiring to become a certified athletic trainer according to the regulations of the National Athletic Trainers Association.
- 442/542 THERAPEUTIC MODALITIES AND EQUIPMENT IN SPORTS MEDICINE\*** 3 credits (30 clinical hours)  
Prerequisites: 3100:206/207 or 3100:208/209, 5550:240. Purpose is to develop techniques and skills among sports medicine personnel in the selection and implementation of therapeutic modalities and the equipment used in the rehabilitation of injuries to athletes.
- 450 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION, INTRAMURALS, AND ATHLETICS\*** 3 credits  
Investigation of procedures for conducting physical education, intramural, and athletic programs. Includes tournament designs, supplies and equipment, liability, curriculum, and general administration. Three hours lecture.
- 451/551 ASSESSMENT AND EVALUATION IN ADAPTED PHYSICAL EDUCATION\*** 3 credits (20 clinical hours)  
Prerequisites: permission of adviser. Investigation, analysis, and selection of appropriate assessment instruments, as well as methodology for determining instructional objectives and activities for handicapped students. Three hours lecture.
- 452 FOUNDATIONS OF PHYSICAL EDUCATION\*** 3 credits  
Overview of the emergence of physical education as a profession and the supporting role of underlying scholarly and scientific disciplines. Three hours lecture.
- 455/555 MOTOR DEVELOPMENT OF SPECIAL POPULATIONS\*** 3 credits  
Prerequisite: permission of adviser. Task analysis essential to structuring activity sequences for motor skills and lifetime fitness activities for handicapped students. Three hours lecture.
- 460 PRACTICUM IN PHYSICAL EDUCATION\*** 3-6 credits (90-180 field hours)  
Prerequisites: senior standing and permission of adviser. Practical work experience with certified personnel in a discipline or profession related to physical education. The experience will be a cooperative effort of the student's adviser, the student and agency personnel directly involved with the practicum.
- 475 SEMINAR IN HEALTH AND PHYSICAL EDUCATION\*** 3 credits (25 clinical hours)  
Provide the opportunity to develop mastery of problem-solving and presentation methods in health and physical education, with experiential learning.
- 460 SPECIAL TOPICS: PHYSICAL EDUCATION\*** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2,3/590,1,2,3 WORKSHOP\*** 1-3 credits each  
Practical, intensive and concentrated involvement with current curricular practices in areas related to physical education.
- 493/593 EDUCATIONAL INSTITUTES: PHYSICAL EDUCATION\*** 1-4 credits  
Practical experience with current research or curricular practices involving expert resource persons in health and physical education. Usually financed by private or public funding.
- 494 STUDENT TEACHING COLLOQUIUM FOR PHYSICAL AND HEALTH EDUCATION\*** 2 credits (20 clinical hours)  
Prerequisites: Core courses, program studies courses; corequisite: Student Teaching, 495. Students meet during student teaching to discuss concerns about student teaching and analyze previous learning as it relates to their future as a professional educator.
- 495 STUDENT TEACHING FOR PHYSICAL AND HEALTH EDUCATION\*** 10 credits (480 field hours)  
Prerequisites: Core courses (2.50), program studies courses (2.50), 2.50 GPA; corequisite: 494. Supervised teaching experience in a school setting for sixteen weeks. Provided with opportunity to teach, to explore new methods and ideas, and to interact within an actual school environment.
- 497 INDEPENDENT STUDY\*** 1-2 credits (30-60 field hours)  
Prerequisite: permission of adviser. Analysis of specific topic related to a current problem in physical education. May include investigative procedures, research or concentrated practical experience.

## OUTDOOR EDUCATION

### 5560:

- 430 SENIOR HONORS PROJECT: OUTDOOR EDUCATION** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 450/550 APPLICATION OF OUTDOOR EDUCATION TO THE SCHOOL CURRICULUM** 4 credits  
Provides knowledge, skills and techniques useful in application of outdoor education to school curriculum.
- 452/552 RESOURCES AND RESOURCE MANAGEMENT FOR TEACHING OUTDOOR EDUCATION** 4 credits  
Methodologies unique to outdoor education which incorporate a multisensory approach to learning. Instructional materials and resources which permit expansion of curriculum beyond the school building.
- 454 RESIDENT OUTDOOR EDUCATION** 2 credits (20 field hours)  
Skills, program considerations, and organizational techniques unique to an extended, overnight, resident outdoor education program. Off-campus location for four days and three nights.
- 456/556 OUTDOOR PURSUITS** 4 credits  
Investigation and participation in practical experiences in outdoor pursuits.
- 460 OUTDOOR EDUCATION PRACTICUM** 2 credits  
Prerequisites: 452, 454. Closely supervised practical experience in conjunction with regularly scheduled classroom meetings. Laboratory experience consists of active participation with an established outdoor education program.
- 490/590 WORKSHOP: OUTDOOR EDUCATION** 1-3 credits  
Practical application of contemporary ideas, methodologies, knowledge relevant to outdoor education. Emphasis on participant involvement in educational practices, utilizing the natural environment.
- 494/594 EDUCATIONAL INSTITUTES: OUTDOOR EDUCATION** 1-4 credits  
Practical experience with current research or curricular practices involving expert resource persons in outdoor education.
- 497 INDEPENDENT STUDY** 1-3 credits (30-90 field hours)  
Prerequisites: permission of adviser and supervisor of independent study. Provides varied opportunities for a student to gain first-hand knowledge and experience with existing outdoor education programs.

## HEALTH EDUCATION

### 5570:

- 101 PERSONAL HEALTH** 2 credits (5 clinical hours)  
This course applies the current principles and facts pertaining to healthful, effective living, personal health problems, and needs of the student. Two hours lecture.
- 201 FOUNDATIONS IN HEALTH EDUCATION** 3 credits (10 field hours, 20 clinical hours)  
Prerequisite: 101. History and philosophy of health education as a discipline; professionalism and administration in health education are considered. Three hours lecture.
- 202 STRESS, LIFE-STYLE AND YOUR HEALTH** 3 credits (20 clinical hours)  
Prerequisites: 101; 201. This course will provide knowledge and attitudes about the relationship between stress and physiological and psychological illness and disease as well as how to prevent and manage stress in daily life activities.
- 320 COMMUNITY HEALTH\*** 2 credits (20 clinical hours)  
Prerequisites: 101 and 201. Study of current public health problems. Organization and administration of various agencies and their role in the solution of community health problems. Two hours lecture.
- 321 ORGANIZATION AND ADMINISTRATION OF SCHOOL HEALTH AND SCHOOL HEALTH SERVICES\*** 4 credits (20 clinical hours)  
Prerequisites: 101; 201, 320. This course presents the organization and administration of the components of the school health program including health instruction, school health services, and the healthful school environment.
- 322 CURRENT TOPICS IN HEALTH EDUCATION\*** 3 credits (20 clinical hours)  
Prerequisites: 101, 201, 320. Skills needed to do research, teach, and present current health education topics in a factual and comfortable manner in schools and community. Three hours lecture.
- 323 METHODS AND MATERIALS OF TEACHING HEALTH EDUCATION\*** 3 credits (10 field hours, 20 clinical hours)  
Prerequisites: 101, 201, 320, 5050:210/211, 5050:310/311. Planning, organization, use of instructional resources and delivery of health education content and teaching processes (K-12). Three hours lecture.
- 350 MEASUREMENT AND EVALUATION IN HEALTH EDUCATION\*** 3 credits (20 clinical hours)  
Prerequisites: 101, 201, 202, 320. Presentation of measurement inventories and evaluation techniques in health education. Testing instruments, administering tests and evaluation procedures are discussed and practiced. Three hours lecture.

\* Students must be in the College of Education to take 300/400 level courses.

\* Students must be in the College of Education to take 300/400 level courses.

- 395 FIELD EXPERIENCE IN HEALTH EDUCATION\*** 1-3 credits (30-90 field hours)  
Prerequisite: permission of the adviser. On-site field experience will be conducted in an area related to health education under the supervision of a faculty member. The student will work with current health education programs.
- 400 ENVIRONMENTAL ASPECTS OF HEALTH\*** 3 credits (5 field hours, 20 clinical hours)  
Prerequisite: Major or minor in health education or instructor's permission. A study of the interrelationships of ecosystems and a healthful environment. This course investigates many aspects of the environment and their influences upon the quality of human life.
- 430 SENIOR HONORS PROJECT: HEALTH EDUCATION\*** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 460 PRACTICUM IN HEALTH EDUCATION\*** 2 credits (60 field hours)  
Prerequisite: permission of the adviser. On-site participation in community health organizations, agencies or resources.
- 497 INDEPENDENT STUDY IN HEALTH EDUCATION\*** 1-2 credits (30-60 field hours)  
Prerequisite: permission of the adviser. Analysis of a specific topic related to a current problem in health education. May include investigative procedure, research or concentrated practical experience.

## EDUCATIONAL GUIDANCE AND COUNSELING

### 5600:

- 110 CAREER PLANNING** 2 credits  
Skills necessary to make effective educational and career decisions. Emphasis upon self-understanding, career exploration, career planning, decision making.
- 410 PERSONNEL SERVICES IN SCHOOLS** 2 credits  
Prerequisite: senior standing. Introduction to background, role and function, techniques, community agencies and issues in personnel field. For student considering pupil personnel fields, social work.
- 426/526 CAREER EDUCATION** 2 credits  
Prerequisite: junior, senior or graduate standing. Examination of current career education models and programs with emphasis on infusion of career education activities into elementary and secondary curriculum.
- 436 HELPING SKILLS FOR RESIDENT ASSISTANTS** 2 credits  
(Credit/noncredit) Prerequisite: open to resident assistants in University housing. A course designed to help student personnel workers become more effective in professional role.
- 450/550 COUNSELING PROBLEMS RELATED TO LIFE-THREATENING ILLNESS AND DEATH** 3 credits  
Prerequisite: permission. Consideration of the global issues, current research, coping behavior, support systems and family and individual needs in regard to life-threatening situations.
- 480 SPECIAL TOPICS: EDUCATIONAL GUIDANCE AND COUNSELING** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490, 1,2/590, 1,2 WORKSHOP** 1-3 credits each  
Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.
- 493/593 WORKSHOP** 1-4 credits  
Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.
- 494/594 COUNSELING INSTITUTE** 1-4 credits  
In-service programs for counselors and other helping professionals.

## SPECIAL EDUCATION

### 5610:

- 201 STUDENT PARTICIPATION: DEVELOPMENTALLY HANDICAPPED** 1 credit (credit/noncredit)  
Prerequisites: sophomore standing and permission. Systematic observation and participation in classes for children with developmental handicaps.
- 202 STUDENT PARTICIPATION: SPECIFIC LEARNING DISABLED** 1 credit (credit/noncredit)  
Prerequisites: sophomore standing and permission. Systematic observation and participation in classes for children with specific learning disabilities.
- 203 STUDENT PARTICIPATION: ORTHOPEDICALLY HANDICAPPED** 1 credit (credit/noncredit)  
Prerequisites: sophomore standing and permission. Systematic observation and participation in classes for children with orthopedic handicaps.

- 204 STUDENT PARTICIPATION: SEVERE BEHAVIOR HANDICAPPED** 1 credit (credit/noncredit)  
Prerequisites: sophomore status and permission. Systematic observation and participation in classes for children with severe behavior handicaps.
- 205 STUDENT PARTICIPATION: MULTIHANDICAPPED** 1 credit (credit/noncredit)  
Prerequisites: sophomore status and permission. Systematic observation and participation in classes for children with multiple handicaps.
- 206 STUDENT PARTICIPATION: GIFTED** 1 credit (credit/noncredit)  
Prerequisites: sophomore status and permission. Systematic observation and participation in classes for children who are gifted.
- 395 FIELD EXPERIENCE: SPECIAL EDUCATION** 1-3 credits  
Prerequisite: upper-college standing. Supervised work with youngsters, individually and in groups in school and/or community settings.
- 403 STUDENT TEACHING COLLOQUIUM: SPECIAL EDUCATION** 1 credit  
Prerequisite: senior status in conjunction with Student Teaching; and corequisites: 480, or 481, or 482, or 483, or 484 and 5050:401. An examination of problems, issues, and practices encountered during the student teaching experience.
- 430 SENIOR HONORS PROJECT: SPECIAL EDUCATION** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
- 440/540 DEVELOPMENTAL CHARACTERISTICS OF EXCEPTIONAL INDIVIDUALS** 3 credits  
Identification, developmental characteristics, and treatment procedures for atypical children and youth in both regular and special education facilities.
- 441/541 DEVELOPMENTAL CHARACTERISTICS OF THE MENTALLY RETARDED** 4 credits  
Prerequisites: 440/540. A survey of the etiology, diagnoses, classification, and developmental characteristics of individuals with mental retardation and developmental disabilities. This course will include individuals classified at all levels of mental retardation: mild, moderate, severe, and profound.
- 443/543 DEVELOPMENTAL CHARACTERISTICS OF THE SPECIFIC LEARNING DISABLED** 3 credits  
Prerequisite: 440/540. Survey of etiology, diagnosis, classification and developmental characteristics of learning disabled individuals.
- 445/545 DEVELOPMENTAL CHARACTERISTICS OF ORTHOPEDICALLY HANDICAPPED INDIVIDUALS** 3 credits  
Prerequisite: 440/540. Etiology, diagnosis, classification, developmental characteristics of the orthopedically handicapped individuals.
- 446/546 DEVELOPMENTAL CHARACTERISTICS OF THE SEVERE BEHAVIOR HANDICAPPED** 3 credits  
Prerequisite: 440/540. Etiology, diagnosis, classification, developmental characteristics of the socially and emotionally maladjusted individuals.
- 450/550 SPECIAL EDUCATION PROGRAMMING: EARLY CHILDHOOD** 3 credits  
Typical and atypical developmental patterns of young children, assessment and implication of handicapping conditions with respect to early intervention and supportive services.
- 451/551 SPECIAL EDUCATION PROGRAMMING: ELEMENTARY LEVEL** 3 credits  
Prerequisite: 440/540. Educational implications in regard to assessment teaching strategies, adaptive materials, evaluations, that are necessary to meet the needs of elementary level exceptional children.
- 452/552 SPECIAL EDUCATION PROGRAMMING: SECONDARY/VOCATIONAL** 3 credits  
Prerequisite: 440/540, and one of the following: 441/541, 443/543, 445/545, 446/546. Study of diagnostic prescriptive service delivery systems designed to accommodate developmental patterns of secondary-level exceptional individuals.
- 453/553 SPECIAL EDUCATION PROGRAMMING: SEVERELY HANDICAPPED I** 3 credits  
Prerequisites: 441/541 or 445/545, and 465/565; 7700:481/697. Study of philosophical bases of instruction, assessment practices, family integration into service delivery, Inter/Trans disciplinary practices, IEP/IEP development, and program development for the severely handicapped.
- 454/554 SPECIAL EDUCATION PROGRAMMING: SEVERELY HANDICAPPED II** 3 credits  
Prerequisites: 441/541 or 445/545, 453/553, 465/565, and 7700:481/697. Advanced program design for teaching persons with severe handicaps. Focuses on program planning, evaluation of student progress; developing instructional materials, and planning for community transition.
- 456/556 SPECIAL EDUCATION PROGRAMMING: SEVERE BEHAVIOR HANDICAPPED** 3 credits  
Prerequisites: 446/546. Students will develop teaching materials, assessment techniques, and IEPs for SBH individuals. Data evaluation and theoretical orientations will be stressed.
- 457/557 SPECIAL EDUCATION PROGRAMMING: ORTHOPEDICALLY HANDICAPPED** 3 credits (20 field hours)  
Prerequisites: 445/545, 451/551, 452/552. Study of programs, services, educational experiences, and adaptations designed to accommodate individuals who are orthopedically handicapped and/or chronically health impaired.
- 459/559 COMMUNICATION AND CONSULTATION WITH PARENTS AND PROFESSIONALS** 3 credits  
Prerequisite: 440/540. Provides the prospective special education teacher with skills in communication and consultation for working with parents of exceptional individuals and other professionals.

\* Students must be in the College of Education to take 300/400 level courses.

- 461/561 TECHNOLOGY AND MATERIALS APPLICATION IN SPECIAL EDUCATION** 3 credits  
Prerequisite: 5050:311 or permission of instructor. Microcomputer operation and programming in special education; operation and use of unique audio or visual tools for handicapped and/or adaptive use of traditional equipment; overview of curriculum materials designed for exceptional learner.
- 462/562 EDUCATING EXCEPTIONAL CHILDREN IN THE REGULAR CLASSROOM** 3 credits  
For non-special education majors, teaching and administrative personnel in the field. This course focuses on the skills and competencies needed (by regular educators) in working successfully with mainstreamed exceptional children.
- 463/563 ASSESSMENT IN SPECIAL EDUCATION** 3 credits  
Prerequisite: 440/540, 5050:310. Prepares student to select, administer and interpret formal and informal assessment procedures and use resulting data in planning educational programs for exceptional individuals.
- 465/565 NEUROMOTOR ASPECTS OF PHYSICAL DISABILITIES** 3 credits  
Prerequisites: 3100:206, or 207, or 208, or 209; 5610:440/540. Provides the student with a basic knowledge of the human neuromuscular system and the impact of neuromuscular damage on the form and function of movement and behavior.
- 467/567 MANAGEMENT STRATEGIES IN SPECIAL EDUCATION** 3 credits  
Prerequisites: 5050:210; 5050:211; 5050:320; 5050:330; 5610:440 and one of the following: 5610:441, 443, 445, or 446. Content emphasizing the development of application strategies with a variety of behavior management models for modification of behaviors with exceptional individuals.
- 470/570 CLINICAL PRACTICUM IN SPECIAL EDUCATION** 3 credits  
Prerequisite: Permission of instructor. Provides a laboratory experience for students to conduct psychoeducational study with students exhibiting learning/behavioral problems in school.
- 479/579 SEMINAR: INVITATIONAL STUDIES IN SPECIAL EDUCATION** 1-2 credits  
(May be repeated for a total of four credits) Topical study with a varied array of disciplinary input. Staffing will be invited members of allied and contributing professions active in management of exceptional children.
- 480 STUDENT TEACHING: DEVELOPMENTALLY HANDICAPPED** 12 credits  
Prerequisites: Senior status, completion of program requirements, and permission; corequisites: 403 and 5050:410. Two full-time, eight-week supervised teaching experiences in special education classes at the elementary and secondary levels.
- 481 STUDENT TEACHING: SPECIFIC LEARNING DISABLED** 12 credits  
Prerequisites: Senior status, completion of program requirements, and permission; corequisites: 403 and 5050:410. Two full-time, eight-week supervised teaching experiences in special education classes at the elementary and secondary levels.
- 482 STUDENT TEACHING: ORTHOPEDICALLY HANDICAPPED** 12 credits  
Prerequisites: Senior status, completion of program requirements, and permission; corequisites: 403 and 5050:410. Two full-time, eight-week supervised teaching experiences in special education classes at the elementary and secondary levels.
- 483 STUDENT TEACHING: SEVERE BEHAVIOR HANDICAPPED** 12 credits  
Prerequisites: Senior status, completion of program requirements, and permission; corequisites: 403 and 5050:410. Two full-time, eight-week supervised teaching experiences in special education classes at the elementary and secondary levels.
- 484 STUDENT TEACHING: MULTIHANDICAPPED** 12 credits  
Prerequisites: Senior status, completion of program requirements, and permission; corequisites: 403 and 5050:410. Two full-time, eight-week supervised teaching experiences in special education classes at the elementary and secondary levels.
- 485 STUDENT TEACHING SPECIAL EDUCATION** 8 credits  
Prerequisite: Completion of major program requirements permission. A full-time 8 week (Summer 5 week) planned teaching experience in a designated setting with exceptional children under the supervision of the cooperating teacher and the University supervisor.
- 490,1,2,3/590,1,2,3 WORKSHOP** 1-3 credits each  
(May be repeated for a total of six credits) Designed to explore special topics in in-service or pre-service education on a needs basis.
- 494/594 EDUCATION INSTITUTES: SPECIAL EDUCATION** 1-4 credits  
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
- 497 INDEPENDENT STUDY: SPECIAL EDUCATION** 1-3 credits  
Prerequisites: permission of adviser and supervisor of the independent study. Specific area of investigation determined in accordance with student's needs.

## SCHOOL PSYCHOLOGY

### 5620:

- 490/590 WORKSHOP** 1-2 credits  
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
- 491,2/591,2 WORKSHOP** 1-3 credits each  
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
- 494/594 SCHOOL PSYCHOLOGY INSTITUTES** 1-4 credits  
Prerequisite: permission of instructor. Specifically designed learning experience for program graduate focusing on critical topics.

## MULTICULTURAL EDUCATION

### 5630:

- 480 SPECIAL TOPICS: MULTICULTURAL EDUCATION** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 481/581 MULTICULTURAL EDUCATION IN UNITED STATES** 3 credits  
Inquiry into multicultural dimensions of American education. Comparisons of urban, suburban and rural educational settings with reference to socioeconomic differences.
- 482/582 CHARACTERISTICS OF CULTURALLY DIFFERENT YOUTH** 3 credits  
Study of characteristics of culturally different youth with focus on youth in low-income areas. Emphasis on cultural, social, economic and educational considerations and their implications.
- 483/583 PREPARATION FOR TEACHING CULTURALLY DIFFERENT YOUTH** 3 credits  
Designed to help prepare trainees to teach culturally different youth from low-income back grounds. Through use of multimedia source materials trainees gain knowledge of background and culture of culturally different learners, determine role of teacher, explore techniques of discipline and classroom management, survey motivational and instructional techniques and examine, prepare and adapt variety of instructional materials for individual, small group and large group instruction.
- 484/584 PRINCIPLES OF BILINGUAL/MULTICULTURAL EDUCATION** 3 credits  
An introduction to the theoretic, cultural, sociolinguistic bases of bilingual/multicultural education. Legislation, court decisions, program implementation included.
- 485/585 TEACHING READING AND LANGUAGE ARTS TO BILINGUAL STUDENTS** 4 credits  
Prerequisite: permission of instructor. Course applies methodologies for teaching reading, language arts in the bilingual/multicultural classroom. The bilingual student's native language, culture stresses.
- 486/586 TEACHING MATHEMATICS, SOCIAL STUDIES AND SCIENCE TO BILINGUAL STUDENTS** 3 credits  
Prerequisites: elementary education majors, 5200:333, 336, 338; for secondary education majors, 5300:311 (science, social studies or mathematics). Course applies methodologies for teaching mathematics, science, social studies in the bilingual/multicultural classroom. The bilingual student's native language stressed.
- 487/587 TECHNIQUES FOR TEACHING ENGLISH AS A SECOND LANGUAGE IN THE BILINGUAL CLASSROOM** 4 credits  
Prerequisite: permission of instructor. Course includes teaching language skills to Limited English Proficient students in grades K-12, administration of language assessment tests, selection and evaluation of materials.
- 490/590 WORKSHOP: BILINGUAL/MULTICULTURAL** 1-3 credits  
Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques

## EDUCATIONAL FOUNDATIONS AND LEADERSHIP

### 5700:

- 480 SPECIAL TOPICS: EDUCATIONAL ADMINISTRATION** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2,3/590,1,2,3 WORKSHOP** 1-3 credits each  
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
- 494/594 EDUCATIONAL INSTITUTES** 1-4 credits  
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

## SPECIAL EDUCATIONAL PROGRAMS

### 5800:

- 490/590 WORKSHOP IN ECONOMIC EDUCATION OR IN SOCIAL STUDIES** *1-3 credits*  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 491/591 WORKSHOP IN ARITHMETIC OR IN PHYSICAL SCIENCE** *1-3 credits*  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 492/592 WORKSHOP IN READING** *1-3 credits*  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 493/593 WORKSHOP ON EXCEPTIONAL CHILDREN** *1-3 credits*  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 494/594 INTERNATIONAL SCHOOL STUDY** *3-6 credits*  
On-the-scene study of education in foreign countries, usually by concentrating on the study of schools in one restricted geographical area.

## EDUCATIONAL TECHNOLOGY 5850:

- 100 INTRODUCTION: PUPIL PERSONNEL WORK** *2 credits*  
Purposes, needs, scope, character of pupil personnel services.
- 201 INFORMATIONAL SERVICES IN GUIDANCE AND SPECIAL EDUCATION** *2 credits*  
Emphasis on organization and status of informational services as related to activities of educational technologist.
- 204 HUMAN RELATIONS IN EDUCATION** *3 credits*  
Study of individual and group relationships in educational setting including development of basic interpersonal skills.
- 207 MECHANICS OF STUDENT APPRAISAL** *3 credits*  
Introduction to group appraisal with major emphasis on assisting certified personnel in group test administration, scoring, organizing and recording test results.
- 213 ORIENTATION OF THE EDUCATIONAL TECHNICIANS TO THE SECONDARY SCHOOL** *2 credits*  
Designed to provide student preparing for role of educational technician with framework for understanding secondary education.
- 260 SPECIAL EDUCATION TECHNOLOGY** *2 credits*  
Survey of selected procedures and materials employed in classrooms especially designed and operated for exceptional children.
- 295 EDUCATION TECHNICIAN FIELD EXPERIENCE** *5 credits*  
(May be repeated once) Supervised field experience in school setting designed for educational technician enrollees only.

# College of Business Administration

## COOPERATIVE EDUCATION

### 6000:

- 301 COOPERATIVE EDUCATION** *0 credits*  
(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

## FINANCE FOR NON-BUSINESS STUDENTS

### 6140:

- 331 PERSONAL FINANCE** *3 credits*  
(For non-College of Business Administration students.) A survey analysis of personal financial decisions related to budgeting, insurance, credit, and investments.
- 370 INTRODUCTION TO FINANCE** *3 credits*  
(For non-College of Business Administration students.) Studies the sources and uses of funds for business.

## MARKETING FOR NON-BUSINESS STUDENTS

### 6160:

- 301 ESSENTIALS OF PROMOTION** *3 credits*  
Prerequisite: Junior standing. Survey of communication tools used by marketers to promote products and services. Course keyed to advertising and sales promotion applications in retail and service sectors.
- 303 ESSENTIALS OF SELLING** *3 credits*  
Prerequisite: Junior standing. Examines concepts, skills, and processes of personal selling within the context of retail and service organizations. Sales exercises and presentations support class lectures and discussion.
- 305 ESSENTIALS OF RETAILING** *3 credits*  
Prerequisite: Junior standing. Survey of basic concepts and principles of retailing including retail formats, store facilities, market analysis, site selection, merchandising management, retail pricing, and promotions management.
- 307 ESSENTIALS OF BUYER BEHAVIOR** *3 credits*  
Prerequisite: Junior standing. Study of the patronage behavior of final consumers within a retail and/or personal setting. Examines the issues of what, where, when, and why consumers buy.
- 309 ESSENTIALS OF RETAIL MERCHANDISING** *3 credits*  
Prerequisite: Junior standing. Practical retail applications in the planning and control of merchandise assortments, merchandise budgets, inventory systems, buying procedures, vendor relationships, and buying practices.

## ACCOUNTANCY

### 6200:

- 200 PROFESSIONAL ORIENTATION** *1 credit*  
Provides an overview of the field of accounting and examines the professional skills and personal attributes required for a successful career in accounting.
- 201 ACCOUNTING CONCEPTS AND PRINCIPLES FOR BUSINESS** *3 credits*  
Prerequisite: 24 hours of college credit. Introduction to accounting concepts and terminology. Accounting for assets, liabilities, and proprietorship. Analysis of cash flow and financial statements.
- 202 MANAGERIAL ACCOUNTING** *3 credits*  
Prerequisite: 201. Information needs of management. Study of product costing systems; standard costs; planning, budgeting, and control systems; responsibility accounting; activity-based costing and activity-based management; cost-volume-profit analysis; relevant costing; and capital budgeting.

- 250 COMPUTER APPLICATIONS FOR BUSINESS** *3 credits*  
Prerequisite: 3460:126 or 2440:130 or 2440:266 Introduces analysis and design of information systems. Provides hands-on experience with microcomputer applications such as spreadsheets, graphics and data-base management using integrated spreadsheet software. For non-Accounting majors only.
- 255 INFORMATION PROCESSING** *3 credits*  
Prerequisite: 201 and 32 credits of completed and current enrollment. Introduction to automatic data processing systems in an accounting and management environment. Fundamentals of computer programming presented to student. For Accounting majors only.
- 301 COST ACCOUNTING** *3 credits*  
Prerequisites: 3250:200, grades of not less than "C" in 6200:201, 202 and satisfactory performance on an Accounting Admission Test approved by the School of Accountancy. Introduction to product costing, emphasizing analysis of materials, labor and factory overhead. Cost control achieved through use of flexible budgets, standard costs and variance analysis.
- 320 ACCOUNTING CYCLES AND FINANCIAL STATEMENTS** *3 credits*  
Prerequisites: Grade of not less than "C" in 6200:201, and satisfactory performance on an accounting admission test approved by the School of Accountancy. Study of the accounting process and financial statements, accounting for cash, receivables and inventory.
- 321 INTERMEDIATE ACCOUNTING I** *3 credits*  
Prerequisite: 320. Accounting for property, plant and equipment, liabilities, stockholders' equity, investments and revenue recognition.
- 322 INTERMEDIATE ACCOUNTING II** *3 credits*  
Prerequisite: 320. Accounting for tax allocation, pensions, leases, accounting changes, cash flows and financial statement analysis.
- 360 BUDGETING** *3 credits*  
Prerequisite: 301. Study of principles and policies of budgeting. Emphasis on managerial control of expenses, capital expenditures and related activities.
- 401 ACCOUNTING SURVEY** *3 credits*  
Prerequisite: permission of instructor. Introductory course for student with no previous accounting background. Essential accounting concepts, techniques and terminology for business organizations.
- 402 ADVANCED COST ACCOUNTING** *3 credits*  
Prerequisite: 301. Study of use of standard cost procedures, job-order costing procedures and advanced problems in area of cost accounting.
- 410 TAXATION FOR THE NON-ACCOUNTANT** *3 credits*  
Provides non-accountant basic knowledge of federal tax law as applied to individuals and businesses. Not open to accounting major.
- 420/520 ADVANCED ACCOUNTING** *3 credits*  
Prerequisite: 322. Examination of accounting theory emphasizing accounting for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements.
- 425 CURRENT DEVELOPMENTS IN ACCOUNTING** *3 credits*  
Prerequisite: 322. Official pronouncements of Accounting Principles Board, Financial Accounting Standards Board and Securities and Exchange Commission, and other current developments in accounting theory. Essential for C.P.A. preparation.
- 430/530 TAXATION I** *3 credits*  
Prerequisite: 320. Federal tax law related to individuals, partnerships, and corporations. Master of Taxation students will not be able to take this course to satisfy tax electives in the Master of Taxation program.
- 431/531 TAXATION II** *3 credits*  
Prerequisite: 430/530. Additional aspects of individual taxation, Federal tax law related to property transfers and retirement and family tax planning.
- 440/540 AUDITING** *3 credits*  
Prerequisites: 255; 321; and 6500:221 must be taken prior to or concurrently. Examines auditing standards and procedures used by independent auditor in determining whether a firm has fairly represented its financial position.
- 454 INFORMATION SYSTEMS** *3 credits*  
Prerequisites: 202, 255 or permission of instructor. Focus on development of accounting methods and procedures, installation and improvement of accounting systems and evaluation of automated data processing systems. This course cannot be taken in lieu of 6500:325 Analysis and Design of Information Systems.
- 480 ADVANCED MANAGERIAL ACCOUNTING** *3 credits*  
Prerequisites: 301; 6400:371; and 6500:330. The use of financial and non-financial information in decision making in both public and private sectors. Problem solving approach is emphasized.
- 470/570 GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING** *3 credits*  
Prerequisites: 320 or 601. Theory and procedures involved in application of fund accounting, budgetary control, appropriations and various accounting systems to governmental units, educational, medical and other nonprofit institutions.
- 480/580 ACCOUNTING PROBLEMS** *3 credits*  
Prerequisite: 322. Independent research on advanced accounting problem in student's specific area of interest.
- 485 CPA PROBLEMS: COMMERCIAL LAW** *2 credits*  
Prerequisite: permission of instructor. Deals with those general principles of commercial law which appear on CPA examination.
- 486 CPA PROBLEMS: ACCOUNTING PRACTICE** *3 credits*  
Prerequisite: permission of instructor. Study of methods for solving various types of problems which appear on accounting practice section of CPA examination.
- 487 CPA PROBLEMS: TAXATION** *1 credit*  
Prerequisite: permission of instructor. Application of current developments in federal income tax law to CPA examination.
- 488/588 CPA PROBLEMS: AUDITING** *2 credits*  
Prerequisite: 440/540 or permission of instructor. Preparation for auditing section of CPA examination, focusing on auditing principles, standards and ethics and situations encountered by independent auditor.

- 489/589 CPA PROBLEMS: THEORY** 2 credits  
Prerequisite: permission of instructor. Preparation for theory section of CPA examination, focusing on current developments and use of basic accounting theory to solve advanced accounting problems.
- 490/590 SPECIAL TOPICS IN ACCOUNTING** 1-3 credits  
Prerequisite: Permission of instructor. Opportunity to study special topics and current issues in accounting. May be repeated with a change of subject.
- 491/591 WORKSHOP IN ACCOUNTING** 1-3 credits  
(May be repeated) Prerequisite: permission of instructor. Group study of accounting under faculty guidance. May not be used to meet undergraduate or graduate accounting major requirements, but may be used for elective credit only with permission of instructor or department.
- 495 INTERNSHIP IN ACCOUNTING** 3 credits (credit/non-credit)  
Prerequisite: permission of instructor. On-the-job training for student in field of public, industrial or nonprofit accounting. Individual assignments made by supervising faculty member.
- 497 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project relevant to accounting approved and supervised by member of the department faculty.
- 499 INDEPENDENT STUDY IN ACCOUNTING** 1-3 credits  
Prerequisite: permission.

## FINANCE

### 6400:

- 220 THE LEGAL AND SOCIAL ENVIRONMENT OF BUSINESS** 3 credits  
Explores the legal and social environment in which modern business must function. The legal system, public and private law, and contemporary social and ethical issues are addressed.
- 290 CAREER PLANNING AND ANALYSIS** 1 credit  
Analysis of career opportunities in finance, business and government. Includes career planning, resume preparation, review of University services, and job search techniques.
- 321 BUSINESS LAW I** 3 credits  
Discussions designed to develop legal reasoning within substantive areas of contractual obligation, agency relationships, partnerships, corporations, accountant's legal responsibility, federal securities regulation and antitrust law.
- 322 BUSINESS LAW II** 3 credits  
Applications of Uniform Commercial Code in sales, commercial paper and secured transactions. Additional discussions include property, wills, estates, trusts, bailments, insurance, suretyship, bankruptcy, and labor law.
- 323 INTERNATIONAL BUSINESS LAW** 3 credits  
The law and international commercial transactions. Among the subjects covered are sovereignty; treaties; agreements; antitrust practices; property rights; international arbitration.
- 325 BUSINESS AND SOCIETY** 3 credits  
Conceptual course considers financial, economic, legal and sociopolitical implications of business in society. Issues related to economic and legal framework for business decisions.
- 332 PERSONAL FINANCIAL PLANNING** 3 credits  
Prerequisite: 371; 6200:250 or 255; or permission of instructor. Capstone financial services course emphasizing theory and case study applications of the comprehensive personal and professional planning process.
- 338 FINANCIAL MARKETS AND INSTITUTIONS** 3 credits  
Prerequisite: 371 or permission of instructor. Studies the flows of funds. Analyzes major financial intermediaries. Money and capital markets reviewed with emphasis on interest rates and their impact upon administration of specific financial intermediaries.
- 343 INVESTMENTS** 3 credits  
Prerequisites: 371, 6500:221, or permission of instructor. Range of security investment media explored, alternative investment programs considered and role of securities markets through which goals can be achieved studied.
- 371 BUSINESS FINANCE** 3 credits  
Prerequisites: 6200: 201, 202; 3250: 200, 201, and 3450:145. An overview of the financial system and the major decision areas of the financial manager such as capital budgeting, financing, and working capital management.
- 379 ADVANCED BUSINESS FINANCE** 3 credits  
Prerequisite: 371; 6200:250 or 255; 6500:222; or permission of instructor. Theory and application of capital budgeting, capital structure, leasing, working capital management, and dividend policy within the financial information system.
- 390 REAL ESTATE PRINCIPLES: A VALUE APPROACH** 3 credits  
Prerequisite: 371 or permission of instructor. A study of real estate: the profession, the process, and the product. Emphasis is on real estate as a product and the valuation process. The measurement of value requires tool abilities in accounting, statistics and finance.
- 401 REAL ESTATE INVESTMENT** 3 credits  
Prerequisites: 390; 6200:250 or 255; or permission of instructor. Advanced course in real estate investment which covers investing in all types of real estate including single-family mortgages and creative investment techniques for income properties.
- 402 INCOME PROPERTY APPRAISAL** 3 credits  
Prerequisites: 390; 6200:250 or 255; or permission of instructor. Advanced course in real property appraisal and valuation. Techniques and concepts will be covered along with the theory underlying such techniques.

- 403 REAL ESTATE FINANCE** 3 credits  
Prerequisites: 390; 6200:250 or 255; or permission of instructor. Advanced course in real estate covering the financing of real property. Included are methods, institutions, instruments, valuation, appraisal and policy in real estate finance.
- 413 PROPERTY AND LIABILITY INSURANCE** 3 credits  
Prerequisite: 371 or permission of instructor. A study of property and casualty insurance contracts, insurance companies, industry regulation.
- 414 LIFE AND HEALTH INSURANCE** 3 credits  
Prerequisite: 371 or permission of instructor. Detailed study of life and health insurance contracts, insurance companies, industry regulations.
- 415 RISK MANAGEMENT AND INSURANCE** 3 credits  
Prerequisite: 371 or permission of instructor. Concept of risk and risk management and principles of insurance are developed in business. Life and health insurance related to employee benefit problems.
- 424 LEGAL CONCEPTS OF REAL ESTATE: A MANAGERIAL APPROACH** 3 credits  
Prerequisite: 371 or permission of instructor. Study of concepts of law governing the many interests in real estate including acquisition, encumbrance, transfer, rights and obligations of parties, and the various state and federal regulations. The legal concepts of the business of real estate are likewise examined. Emphasis is on a managerial approach utilizing the case method.
- 436 COMMERCIAL BANK MANAGEMENT** 3 credits  
Prerequisite: 338; 6200:250 or 255; or permission of instructor. Study of administrative policy determination and decision making within the commercial bank. Analyses of policy making in areas of liquidity, loan and security investment and sources of funds.
- 447 SECURITY AND PORTFOLIO ANALYSIS** 3 credits  
Prerequisite: 343; and 6200:250 or 255; or permission of instructor. Application of quantitative and qualitative techniques of analysis to fixed income and equity securities, and their composition weights in portfolios during different time periods.
- 473 FINANCIAL STATEMENT ANALYSIS** 3 credits  
Prerequisites: 371; 6200:250 or 255; or permission of instructor. Analysis and interpretation of the financial position and performance of the business firm from the perspective of the credit and financial analyst. Emphasizes mechanics and art of financial analysis.
- 475 COMMERCIAL AND CONSUMER CREDIT MANAGEMENT** 3 credits  
Prerequisite: 371; 6200:250 or 255; or permission of instructor. An examination of the role of credit; the application, investigation, authorization, collection and legal processes principally from the point of view of the business manager.
- 481 INTERNATIONAL BUSINESS FINANCE** 3 credits  
Prerequisite: 371 or permission of instructor. Theory and practice of financial wealth maximization in the international business enterprise.
- 485 FINANCIAL STRATEGY** 3 credits  
Prerequisite: senior standing; 379; or permission of instructor. Capstone course with applications of financial management theories and tools to decisions in capital budgeting, capital structure, and working capital management.
- 490 SELECTED TOPICS IN FINANCE** 1-3 credits  
Prerequisite: 371; 6200:250 or 255. Provides opportunity for study of special topics not covered in current finance courses.
- 491/591 WORKSHOP IN FINANCE** 1-3 credits  
(May be repeated) Group studies of special topics. May not be used to meet undergraduate or graduate major requirements in finance. May be used for elective credit only with permission of instructor or department.
- 495 INTERNSHIP IN FINANCE** 1-3 credits  
Prerequisite: 6400:371, and 6200:250 or 255. On-the-job experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports and term papers required as appropriate. (Credit/Non-credit)
- 497 HONORS PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project relevant to finance approved and supervised by member of the department faculty.
- 499 INDEPENDENT STUDY: FINANCE** 1-3 credits  
Prerequisite: permission of department head. Provides means for individualized in-depth study of finance problem or problems from which student can derive significant benefit.

## MANAGEMENT

### 6500:

- 221 QUANTITATIVE BUSINESS ANALYSIS I** 3 credits  
Prerequisite: 3450:145. Math diagnostic test and review, probability; descriptive statistics; sampling distributions; interval estimations; introduction to hypothesis testing and p-values. Case analysis with written and oral team reports will be used.
- 222 QUANTITATIVE BUSINESS ANALYSIS II** 3 credits  
Prerequisite: 221. Continuation of hypothesis testing; ANOVA; simple and multiple linear regression; one- and two-sample nonparametric procedures; chi-square tests of goodness of fit and association; multi-sample nonparametric procedures. Cases and team projects will be used.
- 301 MANAGEMENT: PRINCIPLES AND CONCEPTS** 3 credits  
Prerequisites: Three credits in behavioral science, economics, mathematics. An interdisciplinary approach to the study of the basic principles of general management theory and practice.
- 302 INTRODUCTION TO ORGANIZATIONAL BEHAVIOR** 3 credits  
Prerequisites: 301 and two courses in psychology, sociology. Investigation of applications of behavioral and social sciences as they relate to individual, group behavior in organizations.

- 310 BUSINESS INFORMATION SYSTEMS** 3 credits  
Prerequisites: 6200:250 or 255. Provides a technical and organizational foundation for understanding the use and importance of information systems and information technology in today's business environment.
- 324 DATA MANAGEMENT FOR INFORMATION SYSTEMS** 3 credits  
Prerequisites: upper-college standing and 310. Developing business application systems using database management systems software, including sequential and random files, finding and arranging records, and database management systems applications.
- 325 ANALYSIS AND DESIGN OF INFORMATION SYSTEMS** 3 credits  
Prerequisite: 310. In-depth coverage of the analysis, design, implementation and maintenance of computer-based information systems. (Cannot be taken in lieu of 6200:454.)
- 330 PRINCIPLES OF OPERATIONS MANAGEMENT** 3 credits  
Prerequisite: 301 and 221; corequisite: 6500:222. An overview of the terminology, fundamental concepts and functional scope of responsibility encountered in the field of operations management.
- 331 PRODUCTION SYSTEMS ANALYSIS I** 3 credits  
Prerequisite: 222 and 330. Application of quantitative models in the analysis and design of operational systems in manufacturing and service environments.
- 332 PRODUCTION SYSTEMS ANALYSIS II** 3 credits  
Prerequisites: 331. Application of advanced models in the analysis and design of operational systems in manufacturing and service environments.
- 341 HUMAN RESOURCE MANAGEMENT** 3 credits  
Prerequisites: two courses in psychology and/or sociology and 301. Principles, policies, practices in administering functions of recruiting, selecting, training, compensating, appraising human resources of organizations.
- 342 LABOR RELATIONS** 3 credits  
Prerequisite: 341. Analysis of management, union and employee objectives, attitudes and strategy, as they affect conduct of business and economy. Stress placed on group assigned readings and reports.
- 407 SMALL BUSINESS MANAGEMENT** 3 credits  
Prerequisite: senior standing. Focuses on problems of organizing and operating a small business. Case studies and field experiences.
- 408/508 ENTREPRENEURSHIP** 3 credits  
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Examines the behavior and environment for entrepreneurship. Focuses on classic and contemporary entrepreneurs and the importance of personal values and strategies. Case studies. Field projects.
- 410/510 SELECTED TOPICS IN ENTREPRENEURSHIP** 1-3 credits  
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Facilitates comparative international study of entrepreneurship, introduction of entrepreneurship to large organizations, or application of student's entrepreneurial skills. Six hour limit.
- 412/512 DEVELOPMENT OF MANAGEMENT THOUGHT** 3 credits  
Prerequisites: upper-college or graduate standing and 301, or 600 or equivalent. Review of development of managerial theories from 5000 B.C. to present with consideration of their application to present organizational settings.
- 421 OPERATIONS RESEARCH** 3 credits  
Prerequisite: 330. Examines the use of operations research techniques in managerial decision-making processes; constrained linear optimization, non-linear optimization, network analysis, queuing theory, simulation.
- 425 DECISION SUPPORT AND EXPERT SYSTEMS** 3 credits  
Prerequisite: 325. Introduction to Decision Support & Expert Systems, design and development using spreadsheet software, Decision Support software and/or Expert Systems shells.
- 433 BUSINESS OPERATIONAL PLANNING** 3 credits  
Prerequisites: 331. Emphasizes the importance of planning in the operations process. Includes forecasting and production management simulation exercises. Also introduces the concept and philosophy of continuous improvement.
- 434 PRODUCTION PLANNING AND CONTROL** 3 credits  
Prerequisites: 331. Coverage of materials management, production planning, scheduling and control. Integrates material from previous courses, provides overall framework including use of computer and quantitative methods.
- 435 QUALITY CONTROL** 3 credits  
Prerequisite: 222 and 330. Emphasis on statistical techniques essential to controlling product quality for both measurement and attribute data. Includes control chart methods and acceptance sampling plans.
- 436 ADVANCED QUALITY CONTROL APPLICATIONS** 3 credits  
Prerequisites: 435. Applications of advanced topics including exponential and cusum charts, experimental design, evolutionary operations (EVOPS), planned experimentation (PLEX) and management of the quality function.
- 437 SPECIAL TOPICS IN QUALITY MANAGEMENT** 3 credits  
Exploration of advanced topics of interest both to the student and professor. Many special applications, case studies, outside speakers, projects in conjunction with local industries.
- 438 PRODUCT QUALITY DESIGN TECHNIQUES** 3 credits  
Prerequisites: 435. Describes the techniques of designing quality into a product. It includes determining customer needs, Taguchi methods of quality loss functions and experimental design, reliability and service.
- 442 COMPENSATION MANAGEMENT** 3 credits  
Prerequisite: 341. Focus on the design, implementation and evaluation of employee compensation and benefits programs.
- 443 ADVANCED HUMAN RESOURCE MANAGEMENT** 3 credits  
Prerequisite: 341. Advanced study of current issues and problems in field of personnel. Emphasis given to current literature and research. Activities may include projects, library research, case studies.
- 455/555 MANAGEMENT OF ARBITRATION: COMMERCIAL, INTERNATIONAL AND HUMAN RESOURCES** 3 credits  
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. A comprehensive study of managerial strategies for commercial, international and human resource arbitration. Graduate requirement: research paper.
- 457 INTERNATIONAL MANAGEMENT** 3 credits  
Prerequisites: upper-college standing and 301 or equivalent. Management practices and techniques of international business organizations. Focus on structure and processes of resource allocation, design and technology, and the impact of culture.
- 458 SELECTED TOPICS IN MANAGERIAL ARBITRATION, MEDIATION AND CONCILIATION** 1-3 credits  
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Study of the various methods and mechanisms by which management can understand and deal with internal and external conflict. Six hour limit.
- 459 SELECTED TOPICS IN INTERNATIONAL MANAGEMENT** 1-3 credits  
Prerequisites: upper-college standing; 301 or equivalent; and 457; or permission of instructor. Selected topics in international management focus on historical or contemporary managerial, production and organizational issues. Includes international simulation game. Six hour limit.
- 471/571 MANAGEMENT PROJECT** 3 credits  
Prerequisite: 331 or 342 or 443. (Student who has earned credit in 471 is ineligible to register for or earn credit in 472, 473.) Student applies modern management principles, practices, theory to an actual problem in industry.
- 472 PRODUCTION/OPERATIONS MANAGEMENT PROJECT** 3 credits  
Prerequisite: 331. (Student who has earned credit in 472 is ineligible to register for or earn credit in 471, 473.) Student applies modern management principles, practices and theory to an actual production problem in industry.
- 473 HUMAN RESOURCE MANAGEMENT PROJECT** 3 credits  
(Student who has earned credit in 473 is ineligible to register for or earn credit in 471, 472.) Prerequisites: 342 or 443 and senior standing. Student applies modern management principles, practices and theory to an actual personnel problem in industry.
- 477 MANAGEMENT SIMULATION** 1 credit  
Prerequisite: 301. Simulation of management practices through computerized game or experiential exercise.
- 478 HUMAN RESOURCE SIMULATION** 1 credit  
Prerequisite: 341. Simulation of human resource practices through computerized or experiential exercises.
- 479 OPERATIONS SIMULATION** 1 credit  
Prerequisite: 331. Simulation of operations management practices through computerized or experiential exercises.
- 480/580 INTRODUCTION TO HEALTH-CARE MANAGEMENT** 3 credits  
Prerequisites: upper-college or graduate standing (Students who are required to take 301 or 600 or have completed 301 or 600 or equivalent are ineligible to take this course for credit). Introductory course for health professionals covering principles and concepts of management applied to health services organizations. For those registered for graduate credit, a major paper is required.
- 482/582 HEALTH SERVICES OPERATIONS MANAGEMENT** 3 credits  
Prerequisites: upper-college standing and 301 or 480 or equivalents, or graduate standing and 580 or 600 or equivalent, or permission of instructor. (Students who have completed 331 are ineligible to take this course for credit). Application of production and operations management concepts and techniques in health services organizations.
- 485/585 SPECIAL TOPICS IN HEALTH SERVICES ADMINISTRATION** 1-3 credits  
Prerequisite: permission of instructor. Special topics in health services administration (e.g., management) focusing on historical and/or contemporary managerial organizational and/or policy/strategy issues as related to health-care organizations and health-care systems. Separate topics may be repeated for a maximum of six credits. For those registered for graduate credit, a major research paper is required.
- 490 BUSINESS POLICY** 3 credits  
Prerequisites: 97 credits and 6500:222, 301, 330; 6200:202, 250 or 255; 6400:371, 220 or 321; 6600:300; 6800:305. Capstone course. Integrates the core business disciplines (accounting, economics, finance, management, marketing) through the use of case analyses. Objective and strategy formulation from an administrative viewpoint and international dimension. Emphasis on oral and written communications.
- 491 WORKSHOP IN MANAGEMENT** 1-3 credits  
(May be repeated with permission of instructor or department) Group studies of special topics in management. May not be used to meet undergraduate major requirements in management. May be used for elective credits only.
- 485 INTERNSHIP IN MANAGEMENT** 1-3 credits  
Prerequisite: permission of instructor. On-the-job experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports, term papers required as appropriate.
- 497 HONORS PROJECT** 3 credits  
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project relevant to management approved and supervised by member of the department faculty.
- 499 INDEPENDENT STUDY: MANAGEMENT** 1-3 credits  
Prerequisites: senior standing and permission of department head. Provides a means for individualized study in management from which student can derive significant value.

# MARKETING

## 6600:

- 293 CAREER ORIENTATION** *1 credit*  
Reviews academic requirements for marketing and advertising majors and examines the professional skills and personal attributes required for a successful business career. Develops student career plan.
- 300 MARKETING PRINCIPLES** *3 credits*  
A general survey of marketing activities including analysis of markets, competition, consumer behavior, information systems, and the assessment of product, price, distribution, and promotion strategies.
- 350 ADVERTISING** *3 credits*  
Prerequisite: 300. Explains and analyzes advertising's role in marketing operations. Special attention given to the integration with sales promotion, event marketing, direct response, and other support strategies.
- 355 BUYER BEHAVIOR** *3 credits*  
Prerequisite: 300. Interdisciplinary approach to the analysis of the nature of consumer buying behavior. Economical, social, and psychological influences on consumers' decision-making processes are examined.
- 370 PURCHASING** *3 credits*  
Prerequisite: 300. Process and activities associated with cost effective buying, international management of all materials and the equipment needed by the manufacturer to produce a product or provide a service.
- 375 PROFESSIONAL SELLING** *3 credits*  
Prerequisite: 300. Builds communication skills while learning about buyer needs, prospecting, making sales presentations, persuading, overcoming sales resistance, closing sales, and building relationships.
- 385 INTERNATIONAL MARKETING** *3 credits*  
Prerequisite: 300 and 6800:305. Provides a basic understanding of the complexities of foreign marketing. It assumes knowledge of the basic international business course.
- 390 MARKETING CHANNELS** *3 credits*  
Prerequisite: 300. An integrative approach to analysis of marketing channels of distribution to complement the more specialized analyses of retailing, wholesaling and physical distribution. Stresses the interaction of firms comprising a channel and the nature of managerial decisions designed to coordinate the efforts of the group of institutions that make up a channel of distribution.
- 415 BUSINESS LOGISTICS** *3 credits*  
Prerequisite: 300. Basic course in source, movement, and storage of goods, including emphasis on economics of transportation and requirements of an effective system.
- 425 ADVERTISING RESEARCH AND EVALUATION** *3 credits*  
Prerequisite: 350. The role and methods of research are studied as they relate to the planning of advertising campaigns, with attention to market analysis, competitor analysis, and copy and media planning. Post-campaign measurement of copy, media and marketing efficiencies and effectiveness are also studied.
- 430 PROMOTIONAL CAMPAIGNS** *3 credits*  
Prerequisite: 350. Examination of total communications efforts involved in planning, developing, and monitoring promotional campaigns. Focus is understanding the nature and roles of the advertiser, agency, and support services.
- 440 PRODUCT PLANNING** *3 credits*  
Prerequisite: 300. Examines the creation of new products and the management of existing products through the life cycle.
- 450 STRATEGIC RETAIL MANAGEMENT** *3 credits*  
Prerequisite: 300. Investigation of strategic and tactical retail decisions and issues through the use of case analysis, computer applications, experiential games, and field projects.

- 460 MARKETING RESEARCH** *3 credits*  
Prerequisites: 300, 6500:221. Emphasizes problem definition and solution approach to marketing research decisions. Situation and data analysis skills are developed through lectures, cases, field projects, and computer applications.
- 470 BUSINESS TO BUSINESS MARKETING** *3 credits*  
Prerequisite: 300. Covers industrial and organizational buyer behavior, as well as the strategic marketing management practices of firms selling to business organizations, governmental agencies, and institutions.
- 480 SALES MANAGEMENT** *3 credits*  
Prerequisite: 300. Develops analytical and managerial skills through case studies and other learning activities relating to the organization, selection, training, motivation, and control of a sales force.
- 490 MARKETING STRATEGY** *3 credits*  
Prerequisites: Senior standing and 425 or 460. Capstone course stressing integration of marketing functions through development of strategic thinking and analytical skills. Course employs case analysis, computer applications, and field projects.
- 491 WORKSHOP IN MARKETING** *1-3 credits*  
Group studies in special topics in marketing. May not be used to meet major requirements in marketing.
- 493 CAREER MANAGEMENT** *1 credit*  
Prerequisite: Senior standing. Examines major steps in organizing and conducting successful job searches. Students conduct career and market audits, develop resumes and letters, and participate in mock interviews.
- 495 INTERNSHIP IN MARKETING** *1-3 credits*  
Prerequisite: permission of instructor. On-the-job experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports and term papers required as appropriate.
- 497 HONORS PROJECT** *1-3 credits*  
(May be repeated for a total of six credits.) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project, relevant to marketing, approved and supervised by member of the department faculty.
- 499 INDEPENDENT STUDY: MARKETING** *1-3 credits*  
Prerequisite: permission of instructor. Provides a means for individualized in-depth study of a marketing problem or problems from which student can derive significant benefit. May not be used to meet major requirements in marketing.

# INTERNATIONAL BUSINESS

## 6800:

- 305 INTERNATIONAL BUSINESS** *3 credits*  
A basic course in international business which can also provide a platform for more specialized international business courses.
- 405 MULTINATIONAL CORPORATIONS** *3 credits*  
Prerequisite: 305 or permission of instructor. Course provides in-depth understanding of the functions, structures and strategic considerations governing the MNCs through theory and case study analysis.
- 421 INTERNATIONAL BUSINESS PRACTICES** *3 credits*  
Prerequisite: 305. An examination and comparison of contemporary business practices around the world. Develops sensitivity to alternative business practices and includes a strong component of cross-cultural communications.
- 497 HONORS PROJECT** *1-3 credits*  
(May be repeated for a total of six credits.) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project, relevant to international business, approved and supervised by member of the department faculty.

# College of Fine and Applied Arts

## COOPERATIVE EDUCATION

### 7000:

- 301 COOPERATIVE EDUCATION** *0 credits*  
(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

## ART

### 7100:

- 105 UNDERSTANDING ART** *3 credits*  
Uses different societies have found for art and how social and technological levels of the society have affected the kind of art they make. No credit toward major in art.
- 120 FUNDAMENTALS OF SCULPTURE** *3 credits*  
A study of sculpture through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.
- 121 THREE-DIMENSIONAL DESIGN** *3 credits*  
Introduction to meaning of "design" and act of designing in real space. Study of naturally occurring form, structure and process.
- 130 FUNDAMENTALS OF SCREEN PRINTING** *3 credits*  
A study of screen printing through lecture and studio experiences. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.
- 131 INTRODUCTION TO DRAWING** *3 credits*  
Freehand drawing experience with an orientation to elements and principles of visual organization. Limited media.
- 132 INSTRUMENT DRAWING** *3 credits*  
Creative uses of mechanical drawing processes for visually descriptive purposes. Proficiency in use of mechanical drawing instruments stressed. Both practical and theoretical drawing styles undertaken.
- 140 FUNDAMENTALS OF ACRYLIC PAINTING** *3 credits*  
A study of the acrylic painting medium through lecture, demonstration and study activity. An exploration and enrichment opportunity for the non-art major. No credit toward a major in art.
- 144 TWO-DIMENSIONAL DESIGN** *3 credits*  
Fundamental information about the theory and practice of visual design as applied to surfaces, including composition, color and pictorial illusions with lecture and studio experience.
- 150 FUNDAMENTALS OF CERAMICS** *3 credits*  
A study of ceramics through lecture and studio experiences. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.
- 160 FUNDAMENTALS OF JEWELRY** *3 credits*  
A study of jewelry making through lecture and studio for the non-art major. No credit toward major in art.
- 170 FUNDAMENTALS OF PHOTOGRAPHY** *3 credits*  
A study of photography through lecture, demonstration and studio work. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.
- 180 FUNDAMENTALS OF GRAPHIC DESIGN** *3 credits*  
A study of graphic design through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward a major in art.
- 184 GRAPHIC DESIGN I** *3 credits*  
Prerequisite: 131; prerequisite or corequisite: 132. Studio experience in use of tools and materials of commercial graphic artist. Elementary design problems in commercial graphic design.
- 185 COMPUTER GRAPHICS FOR ART I** *3 credits*  
(May be repeated for a total of six credits) Prerequisites: 131 and 144 or 286 or 2240:124 or permission of instructor. Introduction to the use of microcomputers as a creative tool for visual artists and designers.
- 180 FUNDAMENTALS OF OFF-LOOM WEAVING** *3 credits*  
A study of off-loom weaving through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward a major in art.
- 200 SURVEY OF HISTORY OF ART I** *4 credits*  
Architecture, sculpture, painting and minor arts from primitive sources through Gothic time period in Europe.
- 201 SURVEY OF HISTORY OF ART II** *4 credits*  
Prerequisite: 100. Architecture, sculpture, painting and minor arts from Renaissance through more recent times, primarily in Western art.
- 210 VISUAL ARTS AWARENESS** *3 credits*  
Lecture course providing appreciation and understanding of arts of various types/periods with emphasis on topics and influences on societies, rather than historical sequence
- 213 INTRODUCTION TO LITHOGRAPHY** *3 credits*  
Prerequisites: 131, 144. Use of lithographic stone and metal plate as printmaking media. Stone and plate preparation, lithographic drawing materials and techniques, paper registration and printing press covered. Emphasis on aesthetic theory, technique and related history.
- 214 INTRODUCTION TO SCREEN PRINTING** *3 credits*  
Prerequisites: 131, 144. Silk screen printmaking. Theory and use of stencil process, positive and negative block-out techniques, photo stencil, registration and printing procedures. Emphasis on aesthetic theory, technique and related history.
- 215 INTRODUCTION TO RELIEF PRINTING** *3 credits*  
Prerequisites: 131, 144. Printmaking using found objects, synthetic materials, as well as traditional woodcut and linoleum engraving. Emphasis on aesthetic theory, technique and related history.
- 216 INTRODUCTION TO INTAGLIO PRINTING** *3 credits*  
Prerequisites: 131, 144. Intaglio printmaking using drypoint engraving, aquatint and soft-ground techniques. Emphasis on aesthetic theory, technique and related history.
- 221 DESIGN APPLICATIONS** *3 credits*  
Prerequisite: 121. Application of creative designing principles to problems of utilitarian function in human-designed and -produced items. May include product design/prototype development, furniture design and construction, display design, etc.
- 222 INTRODUCTION TO SCULPTURE** *3 credits*  
Prerequisite: 121. Exploration of aesthetic factors influencing sculptural statements. Development of proficiency in the use of tools, materials and techniques.
- 231 DRAWING II** *3 credits*  
Prerequisite: 131. Continuation of 131. In-depth exploration of wide range of techniques and media. Attention to controlled descriptive drawing and space illusion and their aesthetic applications.
- 233 LIFE DRAWING** *3 credits*  
Prerequisite: 131. Perceptual problems in drawing from the life model. Study of skeletal, muscular, mechanical nature of human figure and application of this knowledge to the resolution of aesthetic problems.
- 234 ANATOMY FOR ARTISTS** *3 credits*  
Prerequisite: 233. Studio/lecture experience in drawing and sculpture with an emphasis on human skeletal, muscular, and surface structure.
- 244 COLOR CONCEPTS** *3 credits*  
Prerequisites: 144 or 286 or 2240:124 and 7100:131. Lecture and studio experience giving information concerning perception of color, additive color phenomena of light, subtractive color phenomena of pigments and dyes, color notation systems and psychological effects of color.
- 245 INTRODUCTION TO POLYMER ACRYLIC PAINTING** *3 credits*  
Prerequisites: 131, 144. Technical, aesthetic problems involved in polymer acrylic painting. Student pursues, through lecture and experimentation, transparent and opaque uses of this water-based paint.
- 246 INTRODUCTION TO WATERCOLOR PAINTING** *3 credits*  
Prerequisites: 131, 144. Studio course in theory and technique of watercolor painting. Study of traditional transparent watercolor methods, and experimentation with less conventional approaches to aqueous media.
- 247 INTRODUCTION TO OIL PAINTING** *3 credits*  
Prerequisites: 131, 144. Study of technical and aesthetic problems involved in oil painting. A painterly orientation toward plasticity of form as mediated by color.
- 248 INTRODUCTION TO AIRBRUSH PAINTING** *3 credits*  
Prerequisites: 131, 144, or for graphic design majors, 286. A beginning studio course in the airbrushing medium concerned with design, observation and critical analysis of art.
- 249 FIGURE PAINTING** *3 credits*  
Prerequisites: 233 and 245, 246, or 247. Painting course with an emphasis on painting the figure from life.
- 250 PORTFOLIO REVIEW** *0 credits*  
Prerequisites/corequisites: 144 or 286, and 121, 131, 132, 233. Credit/noncredit course. Faculty review of art foundation studio work from prerequisite/corequisite courses.
- 254 INTRODUCTION TO CERAMICS** *3 credits*  
Studio/lecture course exploring potentials of hand-building techniques in both sculptural and functional forms. Clay processing, glaze application and practical kiln firing.
- 266 INTRODUCTION TO METALSMITHING** *3 credits*  
Prerequisite: 121, 144, or for graphic design majors, 286. Studio experience in which student is introduced to properties of metals, processes of silversmithing and design and production of jewelry.
- 268 COLOR IN METALS** *3 credits*  
Prerequisite: 366. Introduction to a variety of techniques to achieve and/or combine color in metals. Techniques such as anodizing aluminum, enameling and the application of color resins and plastics will be explored.
- 275 INTRODUCTION TO PHOTOGRAPHY** *3 credits*  
Prerequisites: 131, 144, or 286. Lecture, studio and laboratory course. Techniques and aesthetics are studied using both 4x5 and 35mm cameras. A 35mm camera with full manual control is required.
- 283 DRAWING TECHNIQUES** *3 credits*  
Prerequisites: 131 and 132. Includes advanced drawing and presentation techniques commonly used in graphic design. Various presentation and design problems will be encountered stressing use of selected drawing methods and processes.
- 285 COMPUTER GRAPHICS FOR ART II** *3 credits*  
(May be repeated for a total of six credits) Prerequisite: 185 or permission of instructor. A follow up to Computer Graphics for Art I. High resolution imaging in both fine art and commercial applications.
- 286 GRAPHIC DESIGN II** *3 credits*  
Prerequisites: 184 and 132. Basic course in visual problem solving emphasizing visual movements in, and graphic elements of, single as well as multiple images. Equal emphasis given to existing and created images.

- 288 LETTERFORM AND TYPOGRAPHY** 3 credits  
Prerequisite: 286. Letter symbols studied in terms of communication and aesthetic awareness. History of letter forms, hand lettering, alphabet design, contemporary type faces and reproduction processes.
- 293 INTRODUCTION TO FIBER ARTS** 3 credits  
Studio/lecture course exploring traditional and nontraditional fiber form, on-loom and off-loom techniques, with emphasis on aesthetics and history of fibers.
- 294 SURFACE DESIGN ON FABRIC** 3 credits  
Prerequisite: 144. Studio/lecture course in two-dimensional design as it applies to fabric, e.g., resist, ornamenting, repeat design. May be repeated for a total of 6 credits.
- 295 FORMS AND FIBERS** 3 credits  
Prerequisite: 293. A three-dimensional, off-loom approach to the study of fibers, paper making, felt making, and basketry techniques. May be repeated for a total of nine credits.
- 300 ART SINCE 1945** 3 credits  
Prerequisite: 101 or permission of instructor. Consideration of significant developments in visual art forms since World War II in architecture, sculpture, printing, photography, metal, textile, ceramics, printmaking and graphic design.
- 302 ART IN EUROPE DURING THE 17TH AND 18TH CENTURIES** 3 credits  
Prerequisite: 101 or permission of instructor. Analysis of major European examples of architecture, landscape design, painting, prints and sculpture from beginning of the 17th Century until approximately 1850.
- 303 RENAISSANCE ART IN ITALY** 3 credits  
Prerequisite: 101 or permission of instructor. Study of architecture, painting and sculpture of Italy during 13th through 16th Centuries.
- 304 ART IN EUROPE DURING THE 19TH CENTURY** 3 credits  
Prerequisite: 101 or permission of instructor. Study and analysis of major developments in visual arts in Europe from 1800 to 1900.
- 305 ART FROM 1900 TO 1945** 3 credits  
Prerequisite: 101 or permission of instructor. Study of significant developments in visual arts from approximately 1900 to 1945.
- 317 PRINTMAKING II** 3 credits  
Prerequisites: 213 or 214 or 215 or 216 in the appropriate medium. Continuation of studio work in printmaking-with concentration in intaglio, relief, lithography, or screen printing. May be repeated for a total of 12 credits with a different process.
- 321 FIGURATIVE SCULPTURE** 3 credits  
Prerequisite: 233. Lecture/studio course exploring the use of the human figure as a sculptural subject. Individual interpretation of the figure using various media and techniques.
- 322 SCULPTURE II** 3 credits  
(May be repeated for a total of nine credits) Prerequisite: 222 or permission. Continuation of 222. Addresses more advanced techniques. May include fabrication, casting, carving, or assemblage.
- 323 LOST WAX CASTING** 3 credits  
Prerequisites: 7100:222 or 254 or 266 or 321. Bronze and aluminum casting using the lost wax process. Students learn foundry techniques and apply them to individual artistic statements.
- 331 DRAWING III** 3 credits  
Prerequisites: 144, 231, 233. Continues concerns of visual organization and technical proficiency with materials begun in 131 and 231, but places more emphasis on use of imagination and development of ideas in drawing.
- 333 ADVANCED LIFE DRAWING** 3 credits  
(May be repeated for a total of six credits) Prerequisites: 231, 233. Studio course in drawing from human figure. Individual interpretation of human figure, using numerous media and drawing techniques. Emphasis on aesthetic structure and formal realization of personal intention.
- 334 DRAWING PORTFOLIO REVIEW** 0 credits  
Prerequisite: 231; corequisites: 7100:331, 333. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.
- 348 PAINTING II** 3 credits  
(May be repeated for a total of nine credits, but limited to a maximum of three credits in a given medium) Prerequisites: 245, 246 or 247 in the appropriate medium. Continuation of painting with concentration in one medium designated by letter as follows: A. Polymer Acrylic, B. Watercolor, C. Oil.
- 350 PAINTING PORTFOLIO REVIEW** 0 credits  
Prerequisites: 245, 247, 348. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.
- 354 CERAMICS II** 3 credits  
Prerequisite: 254. Wheel throwing of both functional and sculptural form. Experiments in glaze chemistry and firing experience with both gas and electric kilns. Emphasis on technique, studio procedures and critical evaluation of each student's progress.
- 366 METALSMITHING II** 3 credits  
(May be repeated for a total of six credits) Prerequisite: 266. Continuation of experiences presented in 266 with further development of skills and expansion of technical knowledge.
- 368 COLOR IN METALS II** 3 credits  
(May be repeated for a total of nine credits) Prerequisite: 268. Continuation of 268. Advanced projects designed to develop the student's aesthetic values in color in metals. Emphasis on individual approach and experimentation.
- 370 HISTORY OF PHOTOGRAPHY** 3 credits  
Prerequisite: 201. A lecture course studying the history of photography from its invention to contemporary issues.
- 375 PHOTOGRAPHY II** 3 credits  
Prerequisite: 275. Projects utilizing photographic media and tools designed to expand student's awareness of visual qualities and order, both in the subject and photographic image. Student must own or have use of camera with controllable shutter, lens, diaphragm, focus and exposure meter.
- 376 PHOTOGRAPHICS** 3 credits  
Prerequisite: 375. Photographic media and equipment used experimentally to produce line conversions, high contrast images, tone separations, shadow reversals and other photoabstractions.
- 380 GRAPHIC VIDEO** 3 credits  
Prerequisites: junior standing in graphic design or mass media-communication and permission of instructor. Study of applied video technologies as related to visual design principles and visual communication concepts in the design and use of graphic imagery.
- 384 GRAPHIC DESIGN PORTFOLIO REVIEW** 0 credits  
Prerequisite: 288; corequisite: 387. Credit/noncredit course. Graphic design faculty review portfolio of studio work completed in prerequisite/corequisite courses.
- 385 COMPUTER GRAPHICS FOR ART III** 3 credits  
Prerequisites: 121, 185. Advanced computer imaging course with an emphasis in three-dimensional modeling and animation. Can be repeated for a total of 9 credits.
- 386 PACKAGING DESIGN** 3 credits  
Prerequisite: 387 or permission of instructor. Synthesis of two- and three-dimensional visual thinking. Research in materials applicable to packaging of various products. Assignment of projects stressing development of conventional and experimental package design.
- 387 ADVERTISING LAYOUT DESIGN** 3 credits  
Prerequisites: 275, 288. Creative exploration of problems in visual merchandising. Projects offer exercises in developing skills from concept through final comprehensive presentation.
- 388 ADVERTISING PRODUCTION AND DESIGN** 3 credits  
Prerequisites: 384, 387 and either 2240:222 or 375. Continuation of 387. More complex projects with emphasis given to mechanical preparation of finished art for various printing processes.
- 400/500 ART IN THE UNITED STATES BEFORE WORLD WAR II** 3 credits  
Prerequisite: 101 or permission of instructor. Consideration of development of art in the United States from earliest evidences to approximately World War II.
- 401/501 SPECIAL TOPICS IN HISTORY OF ART** 1-3 credits  
(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 100, 101 or permission of instructor. Lecture course in which subject is specified each time course is offered. Focuses upon an art movement, time period, the production of a single artist or a specific art medium.
- 405/505 HISTORY OF ART SYMPOSIUM** 1-3 credits  
(May be repeated for credit when a different subject is indicated) Prerequisite: one art history course beyond 201 or permission of instructor. Lecture, individual research and evaluation, group discussion related to a specific time period or to an artistic problem.
- 418 ADVANCED PRINTMAKING** 3 credits  
(May be repeated for a total of 12 credits) Prerequisites: 121, either 245 or 246 or 247, 317 in the appropriate process, and 375. Lectures, demonstrations and experiments with more sophisticated printmaking techniques and applications. Concentration in one process designated by letter as follows: A. Lithography, B. Sengraphy, C. Relief, D. Intaglio.
- 420 SCULPTURE PORTFOLIO REVIEW** 0 credits  
Prerequisites: 7100:222, 321, 322, 323; corequisite: 7100:422. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.
- 422 ADVANCED SCULPTURE** 3 credits  
(May be repeated for a total of nine credits) Prerequisite: 322. Development of individual points of view and sculptural statements.
- 431 DRAWING IV** 3 credits  
(May be repeated for a total of nine credits) Prerequisites: 121, 132, 331. In-depth study of drawing for advanced art student. Emphasis on interpretive and inventive drawing using widest possible range of media and techniques.
- 449 ADVANCED PAINTING** 3 credits  
(May be repeated for a total of nine credits) Prerequisites: 121, 231, 233, 348 in the appropriate medium. Advanced-level painting course. Opportunity to explore polymer acrylic, oil or water color painting techniques, and experiment with aesthetics of color, form and style. Concentration in one medium designated by letter as follows: A. Polymer Acrylic, B. Watercolor, C. Oil.
- 454 ADVANCED CERAMICS** 3 credits  
(May be repeated for a total of 15 credits) Prerequisite: 354. Emphasis on refinement of technique toward personal aesthetic statement in preparation for professional or private studio production. Student may choose a general survey of subject matter or a more concentrated area of study.
- 455 FIBER, CLAY AND METAL SEMINAR** 2 credits  
Prerequisite: permission of instructor. Open formal seminar designed to explore ideas in clay, fiber and metal art through reading, discussion and production.
- 465 CRAFTS PORTFOLIO REVIEW** 0 Credits  
Prerequisites: 294, 354 and 366. Corequisite: 295, 454 or 466. A committee of full-time faculty review portfolio of studio work completed in prerequisite/corequisite courses.
- 466 ADVANCED METALSMITHING** 3 credits  
(May be repeated for a total of 12 credits) Prerequisites: 366. Investigation in depth of aesthetic and technical problems of metalsmithing. Student works on individual projects under guidance from instructor.
- 467 METALSMITHING PORTFOLIO REVIEW** 0 credits  
Prerequisites: 266, 366, 366; corequisite: 466. A committee of full-time faculty review portfolio of studio work completed in prerequisite courses.
- 475 ADVANCED PHOTOGRAPHY** 3 credits  
(May be repeated for a total of 12 credits) Prerequisite: 375. Photographic media, light and photographic equipment manipulated experimentally to produce creative graphic images. Student works under guidance of instructor on advanced individual projects.
- 476 PHOTOGRAPHY PORTFOLIO REVIEW** 0 credits  
Prerequisites: 275, 375, 475. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.

- 477 ADVANCED PHOTOGRAPHY: COLOR** 3 credits  
Prerequisite: 475. Advanced level lecture, studio, and lab experience in color photography introducing students to technical, aesthetic, and conceptual issues of the medium.
- 480 ADVANCED GRAPHIC DESIGN** 3 credits  
(May be repeated for a total of nine credits) Prerequisite: 388 or permission of instructor. Student works on advanced-level individual projects under supervision of instructor.
- 482 CORPORATE IDENTITY AND GRAPHIC SYSTEMS** 3 credits  
Prerequisite: 185, 384 and 388. Advanced projects in corporate identity, graphic systems analysis, design. Problem solving for these specific areas of graphic design within mechanical limitations of art reproduction.
- 483 GRAPHIC DESIGN PRESENTATION** 3 credits  
Prerequisite: 283 or 482. To be taken the last semester before graduation. Students prepare a professional portfolio and resume. Includes individual project development, portfolio review and exhibition.
- 484 ILLUSTRATION** 3 credits  
Prerequisite: 283 or permission of instructor. Application of painting and drawing skills and aesthetic sensitivity to specific commercial illustration and editorial art assignments.
- 485 ADVANCED ILLUSTRATION** 3 credits  
(May be repeated for a total of nine credits) Prerequisite: 484 or permission of instructor. Advanced projects designed to tune student's personal aesthetic to communicative imagery. A more individual approach to design. Drawing and painting emphasized as is experimentation with multimedia.
- 488 PUBLICATION DESIGN** 3 credits  
Prerequisite: 482. Advanced research, design of promotional brochures, annual reports and other multipaged communicational print. Emphasis on total design from concept to camera-ready art. Individual approach to communicative graphics stressed. Portfolio development.
- 489 SPECIAL TOPICS IN STUDIO ART** 3 credits  
(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisite: advanced standing or permission of instructor. Group investigation of a particular phase of art not offered by other courses.
- 490/590 WORKSHOP IN ART** 1-4 credits  
(May be repeated for credit when a different subject or level of investigation is indicated) 490 to maximum of eight credits; 590 to maximum of 12 credits) Prerequisite: advanced standing in art or permission of instructor. Group investigation of a particular phase of art not offered by other courses in curriculum.
- 491/591 ARCHITECTURAL PRESENTATIONS I** 3 credits  
Prerequisites: Junior level or permission. Studio practice in architectural design and presentation methods in residential and commercial interiors.
- 492/592 ARCHITECTURAL PRESENTATIONS II** 3 credits  
Prerequisites: 491/591. Continuation of concepts covered in Architectural Presentations I with additional work in color rendering techniques. Emphasis on a variety of rendering mediums.
- 495 SENIOR EXHIBITION** 0 credits  
Prerequisite: senior standing and permission. Exit review of work from B.F.A. candidate's major courses.
- 496 ART INTERNSHIP/PROFESSIONAL EXPERIENCE** 1-12 credits  
(Repeatable for credit. No more than 12 credits of internship may apply toward the elective requirement for completion of any art department major.) Prerequisites: junior level in major program and permission of Internship Director. In-depth professional training affording the intern on-the-job experience in selected areas of specialization.
- 497/597 INDEPENDENT STUDIES** 1-3 credits  
(May be repeated) Prerequisites for art majors: advanced standing in area chosen and permission of instructor. Prerequisite for non-art majors: permission of instructor. Investigation in depth of aesthetic and technical problems within a studio-selected area of specialization. Student must present in writing a proposed study plan and time schedule for instructor approval.
- 498/598 SPECIAL PROBLEMS IN HISTORY OF ART** 1-3 credits  
(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 14 credits in art history and permission of instructor. Individual research in art history centered around limited topic, such as specific time period, history of specific techniques, a single artist or movement in art history. No more than 10 credits will be counted toward major.
- 499 HONORS IN ART** 3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in the Honors Program and approval of honors project by faculty preceptor. To be used for research in the Honors Program established by student and his/her adviser(s).
- 121 TEXTILES** 3 credits  
Basic study of natural and manufactured fibers. Emphasis on physical properties, selection and care. Attention given to design and manufacture of textiles. Lecture/Laboratory.
- 122 FUNDAMENTALS OF CONSTRUCTION** 3 credits  
Basic theory and application of construction fundamentals, including experiences with patterns and specialty fabrics.
- 132 EARLY CHILDHOOD NUTRITION** 2 credits  
Emphasis on nutrition as component of Early Childhood programs. Nutrition principles discussed in relation to self and young children. Prenatal and infant nutrition studied. Food as learning experience, menu planning, purchasing, sanitation, food labeling, storage and parent involvement included. For Family and Child Development Option, and an educational technology student.
- 133 NUTRITION FUNDAMENTALS** 3 credits  
Study of basic nutrition concepts, contemporary issues, controversies; emphasis on macro/micro nutrient requirements for healthy individuals; analysis of intake and energy balance.
- 141 FOOD FOR THE FAMILY** 3 credits  
Application of nutrition to meal planning; problems in selecting, budgeting and preparing food; meal service.
- 147 ORIENTATION TO PROFESSIONAL STUDIES IN HOME ECONOMICS AND FAMILY ECOLOGY** 1 credit  
Survey of history and development of home economics with emphasis on professional and career opportunities.
- 158 INTRODUCTION TO INTERIOR DESIGN** 3 credits  
Introduction to interior design studies with emphasis on developing basic skills and competencies required for residential design.
- 201 COURTSHIP, MARRIAGE AND FAMILY RELATIONSHIPS** 3 credits  
Love, intimacy, relationship development, sexuality, marriage/child rearing are studied in lifespan perspective. Emphasis placed on individual relation to changing family/social/cultural demands.
- 204 SURVEY OF APPLIED HOME ECONOMICS IN THE COMMUNITY** 1 credit  
Directed study and observation of ongoing community and business programs in home economics and family ecology related areas including housing, home management, family financial management, food and nutrition, clothing, child development, parent effectiveness and handicapping conditions through family life cycle. Weekly two-hour local tour in addition to class sessions.
- 218 FAMILY HEALTH AND HOME NURSING** 2 credits  
Overview of strategies for generation of positive physical, mental and emotional health across individual and family life cycles. Emphasis on preventative strategies as well as home-care procedures.
- 219 CLOTHING COMMUNICATION** 3 credits  
Study of cultural, social, psychological and economic aspects of clothing. Emphasis on expression and use of clothing in relation to self, society and culture. Lecture/discussion.
- 221 EVALUATION OF APPAREL AND HOUSEHOLD TEXTILES** 3 credits  
Prerequisite: 121. Emphasis on product knowledge and the development of evaluation criteria useful in selecting apparel and household textiles.
- 239 THE FASHION AND FURNISHINGS INDUSTRIES** 3 credits  
Overview of fashion and furnishing industries including production, distribution, promotion, and the impact of cultural influences. Discussion of career opportunities.
- 245 FOOD THEORY AND APPLICATION I** 3 credits  
Prerequisites: 133, 3150:129 or permission of instructor. Scientific and aesthetic principles involved in the selection, storage and preparation of foods for optimum nutrition, palatability and safety. Lecture/Lab.
- 246 FOOD THEORY AND APPLICATION II** 3 credits  
Prerequisite: 245. Study of chemical and physical structure of foods and the effects of natural changes, preparation and processing on properties and acceptability. Lecture/Laboratory.
- 255 FATHERHOOD: THE PARENT ROLE** 3 credits  
Prerequisites: 201 or 265. Historic evolution of the father role, its changing social definition, and father's potential effects on a child's development—birth through adolescence.
- 257 INTRODUCTION TO AUTOCAD FOR INTERIOR DESIGN** 3 credits  
Prerequisites: 7400:158. An introductory course in computer drafting as an alternative to conventional drafting for interior design applications.
- 258 LIGHT IN MAN-MADE ENVIRONMENTS** 3 credits  
Prerequisite: 158. An introductory course in computer drafting as an alternative to conventional drafting for interior design applications.
- 259 FAMILY HOUSING** 3 credits  
A study of three basic aspects of family housing: physical/design, financial/legal, and sociological.
- 265 CHILD DEVELOPMENT** 3 credits  
Physical, cognitive, language, social, emotional, and personality development of the child from prenatal through age eight. Observation of children in early childhood educational settings.
- 270 THEORY AND GUIDANCE OF PLAY** 3 credits  
Prerequisite: 265. Theory and guidance of play as primary vehicle and indicator of physical, intellectual, social, emotional development and learning of children from birth to kindergarten.
- 275 PLAY AND CREATIVE EXPRESSION ACTIVITIES** 4 credits  
Prerequisite: 265. Importance of play in child's social, emotional, intellectual and physical growth. Encouragement of creativity in adults and children through planned experiences that provide for individual expression.
- 280 CREATIVE ACTIVITIES FOR PRE-KINDERGARTEN CHILDREN** 4 credits  
Prerequisite: 265. Planning, presenting, evaluating creative activities in art, music, movement, language arts, logico-mathematics and science. Space, time, materials and adult-child interaction are emphasized.
- 290 ADMINISTRATION OF CHILD-CARE CENTERS** 3 credits  
Prerequisites: 265, 275 or permission of instructor. Study of principles, concepts and procedures involved in working with children in preschool programs. Curriculum innovation and implementation, parent involvement, observation and recording of children's progress.
- 295 DIRECT EXPERIENCES IN THE HOSPITAL** 1 credit  
Prerequisite: permission of adviser. Individual learning experiences for students with patients, their families and the hospital personnel in various hospital settings under the direction of hospital and University staff.
- 300 LEGAL ENVIRONMENT OF FAMILIES** 3 credits  
Introduction to legal terminology, reasoning and analysis, court systems and procedures within the context of family and consumer law.

## HOME ECONOMICS AND FAMILY ECOLOGY

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### 7400:

- 301 CONSUMER EDUCATION** 3 credits  
Study of consumer needs, concerns and problems as related to individual consumer, to consumers in the market economy and to the complex society in which families function.
- 302 CONSUMERS OF SERVICES** 3 credits  
A study of the services sector of the economy. Emphasis is on a framework for studying all service providers and in developing criteria for evaluating service providers.
- 303 CHILDREN AS CONSUMERS** 3 credits  
Study of the consumer role of children three through eighteen years. Emphasizes research data on children as consumers and consumer education for children.
- 305 ADVANCED CONSTRUCTION AND TAILORING** 3 credits  
Prerequisite: 123. Advanced theory and principles in construction of couture garment. Construction of coat or suit jacket utilizing custom tailoring techniques. Two hours lecture, four hours laboratory.
- 310 FOOD SYSTEMS MANAGEMENT I** 5 credits  
Prerequisites: 245; 6200:201 or 2420:211 or permission; corequisite: 315. Basic theoretical concepts in the management of dietetic food service systems and the practical application of principles and procedures in quantity food production and service.
- 311 CONTEMPORARY NEEDLE ARTS** 3 credits  
Use of appropriate textiles, yarns and needles in creation of various items for purposes of enhancing leisure time or as earning skills. Lecture/laboratory.
- 315 FOOD SYSTEMS MANAGEMENT I CLINICAL** 2 credits  
Prerequisite: 245; corequisite: 310. Development of quantity food preparation and supervision skills in community agencies; identification of functions and resources involved in the management of food service systems.
- 316 SCIENCE OF NUTRITION** 4 credits  
Prerequisites: 133, 3100:207, 3150:203, or instructor permission. In-depth characterization of composition, metabolism, physiological functions and interrelationships of nutrients. Analysis and interpretation of current literature; assessment of nutrition counseling techniques.
- 328 NUTRITION IN MEDICAL SCIENCE I** 4 credits  
Prerequisite: 316, 426, or instructor permission. Analysis of therapeutic health-care concepts. Consideration of nutritional implications of pathological conditions; construction of diets for specific disorders.
- 329 NUTRITION IN MEDICAL SCIENCE I CLINICAL** 2 credits (credit/noncredit)  
Prerequisites: 316 or 426. CP student only; corequisite: 328. Clinical experiences in area hospitals for application of principles of nutritional care learned in 328.
- 332 HUMAN FACTORS AND INTERIOR SPACE** 3 credits  
Prerequisites: 158, 259. A comprehensive study of human factors in order to insure the proper relationship between user and interior spaces.
- 333 SPACE PLANNING AND PROGRAMMING** 3 credits  
Prerequisites: 7400:158,259; 7100:491. A comprehensive study of space planning principles and the programming phase of the design process.
- 334 SPECIFICATIONS FOR INTERIORS I** 3 credits  
Prerequisites: 7400:121,158,259. A comprehensive study of composition, characteristics, manufacture, dimensions and use, bi-products, installation, and specifications of interior construction materials.
- 335 SPECIFICATIONS FOR INTERIORS II** 3 credits  
Prerequisites: 7400:121,158,334. A comprehensive study of interior finish material with emphasis on soft goods and textiles, selection criteria, estimating, and writing specifications.
- 336 PRINCIPLES AND PRACTICES OF DESIGN** 3 credits  
Prerequisites: 7400:158,258,333,334,335; 2940:250. Study of the business of interior design to include initiating and maintaining a successful practice in residential or non-residential design.
- 340 MEAL SERVICE** 2 credits  
Prerequisites: 245 or 141. Management of resources in relation to marketing, meal preparation and service; appropriate forms of service for various types of meals. Preparation of foods from various parts of the world.
- 352 STRATEGIC MERCHANDISE PLANNING** 3 credits  
Prerequisite: 6600:340 or 2520:201. The fashion buyer's role in merchandise management and decision making with spreadsheets and merchandise mathematics incorporated into computer simulations.
- 360 PARENT-CHILD RELATIONS** 3 credits  
Prerequisite: 265. The study of interactive parent-child relations from infancy through adult hood and the internal and environmental forces which impact upon family dynamics.
- 362 FAMILY LIFE MANAGEMENT** 3 credits  
Introduction to management theories, processes and principles as applied to utilization of human and material resources in promotion of individual and family well-being.
- 390 FAMILY RELATIONSHIPS IN MIDDLE AND LATER YEARS** 3 credits  
Exploration of family and individual development during middle and later years of life. Emphases on issues related to intimacy, economics, social policies, psychological and biological changes.
- 395 COMMUNITY INVOLVEMENT IN HOME ECONOMICS** 1-3 credits  
Development of managerial expertise through experience. Selected participation sites in business and industry, hospitals, community agencies and with individual families with special managerial problems.
- 401/501 FAMILY-LIFE PATTERNS IN THE ECONOMICALLY DEPRIVED HOME** 2 credits  
Study of family life orientation and life-style patterns among economically deprived with emphasis on impact of socioeconomic and psychological deprivation on family members throughout family life span.
- 403/503 ADVANCED FOOD PREPARATION** 3 credits  
Prerequisite: 141 or 245 or permission of instructor. Study of advanced techniques of food preparation. Introduction to and interpretation of classic and foreign cuisines. Emphasis on individualized experience, skill development and evaluation of procedures and results.
- 404/504 ADOLESCENCE IN THE FAMILY CONTEXT** 3 credits  
Prerequisites: 201, 265 or permission of instructor. The influences of adolescent behavior on the family and the influence of the family environment on adolescent development.
- 406/506 FAMILY FINANCIAL MANAGEMENT** 3 credits  
Analysis of the family as a financial unit including financial problems and their resolution, decision-making patterns and financial practices behavior. Cases, exercises, problems and computer analysis.
- 412 INSTITUTIONAL MANAGEMENT** 3 credits  
Organization and management in administration of food service systems; problems in administration of food service systems; problems in control of labor, time and cost. Field experience in food production.
- 413 FOOD SYSTEMS MANAGEMENT II** 3 credits  
Prerequisite: 310. Advanced concepts in management of dietetic service systems relating to achievement of nutritional care goals.
- 414 FOOD SYSTEMS MANAGEMENT II CLINICAL** 3 credits (credit/noncredit)  
Prerequisite: 315; corequisite: 413. CP students only. Application of advanced food systems management concepts in community dietetic food service facilities; preparation for entry-level staff positions as administrative dietitians; clinical experience for 24 hours per week for 10 weeks of semester.
- 415 HOUSEHOLD EQUIPMENT** 2 credits  
Selection, use and care of modern household equipment. Survey of commercial equipment used in home economics related professions.
- 418/518 HISTORY OF INTERIOR DESIGN I** 4 credits  
The study of furnishings, interiors, and architecture from antiquity through the eighteenth century, with emphasis on the social-cultural influences shaping their development.
- 419/519 HISTORY OF INTERIOR DESIGN II** 4 credits  
The study of nineteenth- and twentieth-century furnishings, interiors, and architecture, with emphasis on the social-cultural influences shaping their development.
- 420/520 EXPERIMENTAL FOODS** 3 credits  
Prerequisites: 246, 3150:130. Theory and methods in the experimental study of foods. Sensory evaluation and instrumental analysis of food quality. Individual research emphasized. Lecture/Laboratory.
- 421 SPECIAL PROBLEMS IN HOME ECONOMICS** 1-3 credits  
Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.
- 422 FAMILY RESOURCE MANAGEMENT** 3 credits  
Theoretical and practical experiences utilized in study of management processes and principles as applied to families. Management of human and material resources and decision-making processes emphasized.
- 423/523 PROFESSIONAL IMAGE ANALYSIS** 3 credits  
Prerequisites: Senior status. Comparison of theories associated with projecting and maximizing an appropriate professional image consistent with career goals and objectives.
- 424/524 NUTRITION IN THE LIFE CYCLE** 3 credits  
Prerequisite: 316, 426, or permission of instructor. Study of the physiological basis for nutritional requirements; interrelating factors which affect growth, development, maturation and nutritional status from conception through the elderly years.
- 425/525 ADVANCED TEXTILES** 3 credits  
Prerequisite: 121. Evaluation of physical, aesthetic, comfort, care, and durability properties of textile products and testing procedures to determine suitability for desired end uses.
- 426 THERAPEUTIC NUTRITION** 5 credits  
Prerequisites: 133, 3100:209, 3150:130, or instructor's permission. Application of principles of nutrition, metabolism and assessment. Analysis and interpretation of current literature. Open to dietetics majors only.
- 427/527 TEXTILE AND APPAREL INDUSTRIES** 3 credits  
Prerequisite: 239. Examines the global structure and scope of the textile and apparel industries emphasizing an economic perspective.
- 428 NUTRITION IN MEDICAL SCIENCE II** 5 credits  
Prerequisite: 328. Continuation of 328. Emphasizing nutritional implications of more complex metabolic and pathological conditions as well as nutrition support strategies.
- 429 NUTRITION IN MEDICAL SCIENCE II CLINICAL** 3 credits (credit/noncredit)  
Prerequisites: 329, CP students only; corequisite: 428. Clinical experience in hospitals; application of principles of nutritional care learned in 428.
- 430 COMPUTER-ASSISTED FOOD SERVICE MANAGEMENT** 3 credits  
Use of computer programs in application of management concepts for food service systems.
- 433/533 RESIDENTIAL DESIGN** 3 credits  
Prerequisites: 7400:158,258,333,334; 7100:491. A comprehensive study of residential design with emphasis on conceptual, analytical, and graphic skills.
- 434/534 COMMERCIAL DESIGN** 3 credits  
Prerequisites: 7400:158,258,333,334; 7100:491. A comprehensive study of non-residential design with emphasis on conceptual, analytical, and graphic skills.
- 436/536 TEXTILE CONSERVATION** 3 credits  
Prerequisites: 121, 123, 317. Principles and practices of textile conservation with emphasis on procedures appropriate for collectors and small historical agencies.
- 437/537 HISTORIC COSTUME TO 1800** 3 credits  
Study of costume and textiles from antiquity through the 18th century, with emphasis on social/cultural influences.
- 438/538 HISTORY OF FASHION SINCE 1780** 3 credits  
Study of 19th and 20th century western fashions, textiles, and designers with emphasis on social-cultural influences.
- 439 FASHION ANALYSIS** 3 credits  
Prerequisite: 239. In-depth study of resources and processes for the analysis and forecasting of fashion trends. Emphasis on current designers and environmental forces that influence fashion.

- 440/540 FAMILY CRISIS** 3 credits  
Study of family stress and crisis including internal and external variables and their influence on degree of disorganization, coping and recovery. Includes theory, research and application dimensions.
- 442/542 HUMAN SEXUALITY** 3 credits  
Prerequisite: 201 or permission of instructor. Introduction to problems and values. Emphasis is on the role of values in intimate relationships, the diverse dimensions of sexual responsibility.
- 445/545 PUBLIC POLICY AND THE AMERICAN FAMILY** 3 credits  
How legislation in such areas as housing, clothing, consumer affairs, family formation and dissolution, resource conservation, child development and health care affects and, in some cases, determines the nature, structure and quality of the family as a social institution.
- 448/548 CULTURE, ETHNICITY AND THE FAMILY** 3 credits  
Study of the role of culture and ethnicity in adaptation of the family system to environment. Program applications considered.
- 447 SENIOR SEMINAR: CRITICAL ISSUES IN PROFESSIONAL DEVELOPMENT** 1 credit  
Prerequisites: 147 and senior standing. Consideration of home economics as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.
- 448/548 BEFORE AND AFTER SCHOOL CHILD CARE** 2 credits  
Study of the development, implementation and evaluation of school-age child-care programs for before and after school and vacation periods.
- 449 FLAT PATTERN DESIGN** 3 credits  
Prerequisite: 123. Theory and experience in clothing design using flat pattern techniques.
- 450 DEMONSTRATION TECHNIQUES** 2 credits  
Prerequisite: major only. Provides practical experience in organization and presentation of demonstrations. Emphasis on competencies in coordination of materials, motion and speech in presentation.
- 451/551 CHILD IN THE HOSPITAL** 4 credits  
Prerequisites: 265, comparable course or permission of instructor. Seminar dealing with special needs and problems of hospitalized/ill child and family. Literature related to effects, separation, illness and stress. Examination of strategies for coping.
- 455/555 PRACTICUM: ESTABLISHING AND SUPERVISING A CHILD-LIFE PROGRAM** 3 credits  
Prerequisite: 451/551. Explores procedures for implementing and setting up child-life programs; critical analysis of currently functioning program.
- 458 OFFICE DESIGN** 3 credits  
Prerequisites: 158, 258, 333, 334; 7100:491. Comprehensive study of the essential principles of planning and designing the modern integrated office.
- 459 SENIOR DESIGN SYNTHESIS** 3 credits  
Prerequisites: 158, 258, 332, 333, 334, 335, 2940:250. A comprehensive study of institution design with participation in a wide range of real-world design problems.
- 460/560 ORGANIZATION AND SUPERVISION OF CHILD CARE CENTERS** 3 credits  
Theory, principles and procedures involved in establishing and operating centers for infants, toddlers, preschool and school-age children.
- 470/570 THE FOOD INDUSTRY: ANALYSIS AND FIELD STUDY** 3 credits  
Prerequisite: 245 or permission. Role of technology in extending the food supply. Chemical, physical and biological effects of processing and storage, on-site tours of processing plants.
- 474/574 CULTURAL DIMENSIONS OF FOOD** 3 credits  
An examination of cultural, geographical and historical influences on development of food habits. Emphasis on evolution of diets; effects of religion, education, gender roles, media.
- 475/575 ANALYSIS OF FOOD** 3 credits  
Prerequisites: 3150:130 and 7400:245. Theory and practice of food analysis by classical and modern chemical and instrumental methods. Principles illustrated by experimentation and demonstration.
- 476/576 DEVELOPMENTS IN FOOD SCIENCE** 3 credits  
Prerequisite: 246. Advanced study of the chemistry and physics of food components, affecting characteristics of foods. Critical evaluation of current basic and applied research emphasized.
- 480/580 COMMUNITY NUTRITION I LECTURE** 3 credits  
Corequisite: 481 for CP students only. Major food and nutrition related problems in the community. Emphasis on community assessment, program implementation and evaluation, and rationales for nutrition services.
- 481/581 COMMUNITY NUTRITION I CLINICAL** 1 credit (credit/noncredit)  
Prerequisite: CP students only; 428. Corequisite: 480/580. Field placement in area agencies offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.
- 482/582 COMMUNITY NUTRITION II LECTURE** 3 credits  
Prerequisite: 480. Corequisite: 483 for CP students only. Activities engaged in by community nutritionist. Emphasis on controversies, cultural differences, educational approaches, grantsmanship, marketing, and working with the media.
- 483/583 COMMUNITY NUTRITION II CLINICAL** 1 credit (credit/noncredit)  
Prerequisite: CP students only; 481/581. Corequisite: 482/582. A second field placement in an area agency offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.
- 484/584 ORIENTATION TO THE HOSPITAL SETTING** 2 credits  
Prerequisite: 265, comparable course or permission of instructor. Focuses on hospital as a major social institution; introduces procedures and functions of the hospital; roles played by various hospital personnel plus cursory knowledge of medical terminology, common childhood diseases, illnesses and injuries.
- 485/585 SEMINAR IN HOME ECONOMICS** 1-3 credits  
Prerequisite: permission of instructor. Exploration and evaluation of current developments in selected areas.

- 486 STAFF RELIEF: DIETETICS** 1 credit (credit/noncredit)  
Prerequisites: 414, CP senior only. Opportunity to function as an entry-level dietician in area of administrative, therapeutic or community dietetics. The graduating senior CUP student spends two 40-hour weeks in a mutually agreeable agency primarily under direction of staff dietitians or coordinators.
- 487/587 SPORTS NUTRITION** 3 credits  
Prerequisites: 133; 3100:209; 3150:130 or 203 or permission of instructor. In-depth study of energy metabolism and utilization before, during, and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.
- 488/588 PRACTICUM IN DIETETICS** 1-3 credits  
Prerequisite: approval of advisor/instructor. Practical experience in application of the principles of nutrition.
- 480/590 WORKSHOP IN HOME ECONOMICS AND FAMILY ECOLOGY** 1-3 credits  
Prerequisite: at least junior standing. Investigation on current issue or topic in selected areas of home economics and family ecology. May be on off-campus study tour or an on-campus full-time group meeting.
- 491/591 WORKSHOP IN HOME ECONOMICS AND FAMILY ECOLOGY** 1-3 credits  
Prerequisite: junior standing. Current issues and topics in selected areas of home economics and family ecology. On/off campus or combined.
- 495 INTERNSHIP: GUIDED EXPERIENCES IN CHILD-LIFE PROGRAM** 8 credits  
Prerequisite: 455. A field experience in a child-life program as a child-life specialist at Children's Hospital-Medical Center of Akron.
- 496/596 PARENTING SKILLS** 3 credits  
Prerequisite: 285, comparable course or permission of instructor. Practical application that reviews and analyzes various parenting techniques with major emphasis on the evaluation of parent education programs.
- 497 INTERNSHIP: HOME ECONOMICS** 2-6 credits  
Prerequisite: permission of instructor. In-depth field experience in business, industry or community agencies related to student's area of specialization.
- 499 SENIOR HONORS PROJECT IN HOME ECONOMICS AND FAMILY ECOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## MUSIC

### 7500:

- 100 FUNDAMENTALS OF MUSIC** 2 credits  
Introduction of basic notation and development of functional music reading and keyboard skills. Conducted in electronic keyboard laboratory with computer-assisted instruction available. For non-music majors only, with little or no previous musical training.
- 101 INTRODUCTION TO MUSIC THEORY** 2 credits  
Designed for prospective music major to correct deficiencies in theory background as determined through department placement testing. Includes classroom instruction and computer-assisted instruction in basic notation, scales; meter, key signatures, ear training and basic familiarity with the keyboard. Credit not applicable toward music degree.
- 103 TRENDS IN JAZZ** 2 credits  
An overview of the first 100 years of jazz music with emphasis on major figures and styles central to the development of jazz. This course is specifically designed for the non-music major.
- 104 CLASS PIANO I** 2 credits  
Prerequisite: 101 or permission of instructor. Designed for student with no previous keyboard experience to learn rudimentary keyboard skills such as playing scales, chords, arpeggios and melodic patterns as well as simple music.
- 105 CLASS PIANO II** 2 credits  
Prerequisite: 104 or permission of instructor. Continuation of work begun in 104.
- 107 CLASS VOICE I** 2 credits  
Prerequisite: 101 or permission of instructor. Minimum memorization and solo singing requirement: seven songs. Voice literature emphasis; folk songs, ballads, spirituals, sacred songs and easy art songs in English.
- 108 CLASS VOICE II** 2 credits  
Prerequisite: 107. Minimum memorization and solo singing requirement: eight songs. Vocal literature emphasis: old Italian and English songs, art songs in English or foreign language if student is conversant with the language.
- 110 CLASS GUITAR FOR NON-MUSIC MAJORS** 1 credit  
Prerequisite: permission of instructor. Introduction to the guitar, its repertoire and techniques. Basic classical techniques and music reading, strums, finger-picking, accompaniment patterns, blues styles will be covered.
- 141 EAR TRAINING/SIGHT READING I** 1 credit  
Prerequisite: 101, or passing placement test, or permission of instructor. The development of skills in Ear Training, Sight Reading and Rhythm.
- 142 EAR TRAINING/SIGHT READING II** 1 credit  
Prerequisite: 141 or permission of instructor. Ear Training, Sight Reading and Rhythm Development; includes modulations, chromatic, whole-tone melodies; asymmetric meters and polyrhythms.
- 151,2 THEORY I, II** 3 credits each  
Sequential. Prerequisite: 101 or permission of instructor. Study and creative use of elements of music; investigation of music of major composers of classic and romantic eras; introduction to earlier musical practices and contemporary music.
- 153 BEGINNING EURHYTHMICS** 2 credits  
Students will develop rhythmic and musical skills through movement and ear training exercises following a methodology developed by Emile Jaques-Dalcroze. (Music majors and minors)

- 154.5 MUSIC LITERATURE I, II** *2 credits each*  
Sequential. Familiarization with large body of musical material from all branches of music writing; vocal, instrumental, symphonic and choral music literature. Special attention given to style, form and structural procedures of principal composers.
- 157 STUDENT RECITAL** *0 credits*  
Required of all music majors until minimum requirement is met. Forum for student and faculty members providing lectures, recitals and opportunity for practice of various skills necessary for successful music performance.
- 173 NOTATION AND CALLIGRAPHY** *2 credits*  
Prerequisite: 101. Techniques involved in writing music symbols and their correct placement on staff paper. Included are specific techniques in orchestral, choral, jazz, popular notation.
- 201 EXPLORING MUSIC** *3 credits*  
Prerequisite: 3400:210. This course offers the non-music major a wide variety of musical experiences along with fundamental skills for the development of musical understanding, appreciation and evaluation.
- 205 MARCHING BAND ORGANIZATION AND TECHNIQUE** *1-2 credits*  
Prerequisite: Two semesters 7510:104 or one semester 7510:104 and equivalent experience as determined by instructor. A discussion of the marching band. Student learns to write complete half-time show, administer marching band program. Required for instrumental music education majors.
- 210 JAZZ IMPROVISATION I** *2 credits*  
Prerequisites: 262 and permission of instructor. Study and application of principles of jazz improvisation as they relate the chord-scale structures, motif development and style.
- 211 JAZZ IMPROVISATION II** *2 credits*  
Prerequisite: 210. Advanced study in principles of jazz composition.
- 212 THE MUSIC INDUSTRY: A SURVEY OF PRACTICES AND OPPORTUNITIES** *2 credits*  
A study of current practices affecting the professional musician and a survey of career opportunities relating to the music industry.
- 241 EAR TRAINING/SIGHT READING III** *1 credit*  
Prerequisite: 142 or permission of instructor. Ear Training, Sight Reading and Rhythm Development; includes two-part dictation, transposition, simple composition.
- 242 EAR TRAINING/SIGHT READING IV** *1 credit*  
Prerequisite: 241 or permission of instructor. Ear Training, Sight Reading and Rhythm Development, includes dictation in three and four parts; thorough bass and composition.
- 251.2 THEORY III, IV** *3 credits each*  
Sequential. Prerequisite: 152. Renaissance vocal counterpoint; Baroque instrumental counterpoint; form and analysis of music of all eras.
- 253 ADVANCED EURYTHMICS** *2 credits*  
Students will enhance rhythmic and musicianship skills through movement and ear training exercises following a methodology developed by Emile Jazues-Dacroze. (Music majors and minors)
- 254.5 STRING INSTRUMENT TECHNIQUES I, II** *2 credits each (25 clinical hours each)*  
Sequential. Fundamentals of technique, tone production, methods and materials pertaining to violin, viola, cello and string bass; heterogeneous string ensemble activities.
- 259 FRETBOARD HARMONY** *2 credits*  
Prerequisite: 261 or permission of instructor. Essentials of basic theory and harmony as applied to the guitar fretboard: accompaniment, improvisation, transposition, modulation, figures bass, sight reading.
- 261.2 KEYBOARD HARMONY I, II** *2 credits each*  
Sequential. Prerequisites: 105 or equivalency and 152. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.
- 263 SERVICE PLAYING FOR ORGANISTS** *2 credits*  
Prerequisites: 152 and 261. Practical course in basic keyboard skills needed by organist to play for religious services in various denominations. Hymn playing, anthem accompaniment and simple improvisation.
- 265.6 DICTION FOR SINGERS II** *2 credits each*  
Sequential. Prerequisite: permission. Study of diction of the four most used languages (Italian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal performers and/or choral and studio voice teachers.
- 271 PIANO PEDAGOGY AND LITERATURE I** *2 credits*  
Prerequisite: permission of instructor. Examination of musical content and pedagogical orientation of beginning piano material to include appropriate teaching works, methods and ensemble pieces from a variety of historical periods.
- 272 PIANO PEDAGOGY AND LITERATURE II** *2 credits*  
Prerequisite: 7520:125 or permission of the instructor. A survey of piano literature at all levels of difficulty, with practical emphasis on its use for teaching.
- 275 DOUBLE REED/PERCUSSION METHODS** *1 credit*  
A comprehensive approach to the performance of oboe, bassoon, and the percussion family of instruments for instrumental music education major in preparation for teaching music.
- 276 BRASS METHODS** *1 credit*  
A comprehensive approach to the performance and pedagogy of brass instruments for instrumental music education majors in preparation for teaching music.
- 277 WOODWIND METHODS** *1 credit*  
A comprehensive approach to the performance and pedagogy of the woodwind family of instruments for the instrumental music education major in preparation for teaching music.
- 297 INTRODUCTION TO MUSIC EDUCATION** *2 credits*  
Prerequisites: 141, 142, 152, 154. Overview of the music teaching profession and its processes. Screening of degree candidates is built into the course along with clinical field experience.
- 301 MUSIC APPRECIATION: MUSIC BEFORE 1800** *2 credits*
- 302 MUSIC APPRECIATION: 19TH AND 20TH CENTURIES** *2 credits*  
301 and 302 are designed as electives for non-music major to provide introductory survey of art of music.
- 307 TECHNIQUES OF STAGE BAND PERFORMANCE AND DIRECTION** *1-2 credits*  
Prerequisite: permission of instructor. Basic experiences relating to conducting, rehearsal techniques, improvisation, performance, repertoire and other matters related to organization and direction of stage bands. Required for instrumental majors.
- 308 THE HISTORY AND LITERATURE OF JAZZ** *3 credits*  
Prerequisite: permission of instructor. Study of origins of jazz music, its development and influence on today's culture. Investigates evolution of musical instruments as they pertain to jazz music, the artists who perform on them, and their music through live and recorded listening experiences.
- 309 JAZZ KEYBOARD TECHNIQUES** *2 credits*  
Prerequisite: 262. Study of and familiarization with basic jazz keyboard techniques as they relate to contemporary jazz harmony and theory.
- 310 JAZZ IMPROVISATION III** *2 credits*  
Prerequisite: 211. Advanced study in the principles of jazz improvisation.
- 311 JAZZ IMPROVISATION IV** *2 credits*  
Prerequisite: 310. Advanced study in the principles of jazz improvisation.
- 320 MUSICAL THEATRE HISTORY AND LITERATURE I** *2 credits*  
From the beginning of Musical Theatre through the 1800s, musicals will be examined for emerging trends and styles in music, dance, and theatre.
- 340 TEACHING GENERAL MUSIC** *2 credits (30 clinical hours, 20 field hours)*  
Prerequisites: 141, 142, 155, 241, 242, 252, 262, 297. Introductions to methods, materials, and skills for teaching non-performance music classes, with emphasis on the elementary grades.
- 341 CURRICULAR INNOVATIONS IN GENERAL MUSIC** *3 credits (30 clinical hours, 20 field hours)*  
Prerequisites: 141, 142, 155, 241, 242, 252, 262, 297, 340. Intensive study of principles, techniques, and materials of Orff, Kodaly, and other current general music methods appropriate for grades K-12. Clinical and field experiences.
- 342 ELEMENTARY INSTRUMENTAL MUSIC** *2 credits*  
Prerequisites: 141, 142, 155, 241, 242, 252, 262, 275, 276, 277, 297. This course prepares teachers for developing innovative elementary instrumental programs. Students will survey materials for creative teaching in instrumental music. Clinical and field experiences.
- 343 SECONDARY INSTRUMENTAL MUSIC** *2 credits (30 clinical hours, 20 field hours)*  
Prerequisites: 141, 142, 155, 241, 242, 252, 262, 275, 276, 277, 297, 336, 342. Introduction to procedures for teaching instrumental music at the secondary level as well as principles of secondary instrumental curriculum design. Clinical and field experiences.
- 344 SECONDARY CHORAL MUSIC METHODS AND MATERIALS** *3 credits*  
Prerequisite: 297 or instructor permission. Methods, techniques, and materials for teaching secondary choral music. Develops competencies in literature, selection, rehearsal techniques, and programming methodology.
- 345 HISTORY AND LITERATURE OF THE WIND BAND** *2 credits*  
Prerequisite: 343 or instructor permission. Course is designed to develop the instrumental band student's understanding of the historical background of wind band literature.
- 350 WOMEN IN MUSIC** *2 credits*  
A historical survey of women's contributions to music and overview of women's position in twentieth-century performance, composition and teaching.
- 351.2 MUSIC HISTORY I, II** *3 credits each*  
Sequential. Prerequisites: 152, 155. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.
- 353 ELECTRONIC MUSIC** *3 credits*  
Theory of electronically generated sound and practice of electronic music composition. Emphasis is on understanding digital and analog synthesizers in a MIDI recording studio.
- 356 MUSIC IN THE TEACHING OF RETARDED AND HANDICAPPED PEOPLE** *2 credits*  
Prerequisite: permission of instructor. Study of application of music to needs of the special person in public/private school, clinical settings.
- 358 FUNCTIONAL CLASS GUITAR** *2 credits*  
Prerequisite: knowledge of music rudiments and permission of instructor. Provides student in music education with basic rudiments of guitar playing as related to use in music classrooms.
- 361 CONDUCTING** *2 credits*  
Study and practice of conducting techniques; patterns, fermatas, tempo and dynamic change, attacks and releases, score reading, aural skills. One hour lab required.
- 363 INTERMEDIATE CONDUCTING: CHORAL** *2 credits*  
Prerequisite: 361 or instructor permission. Introduction to choral conducting with emphasis on manual techniques, vocal skills, aural skills, and gaining conducting experience.
- 365 SONG LITERATURE** *2 credits*  
Prerequisite: 252 or permission. Exposes student systematically to vocal literature, aiding in their ability to distinguish between various periods and styles of music through recordings and class participation.
- 368 GUITAR STYLES** *2 credits*  
Prerequisite: 200 performance level or permission of instructor. Techniques involved in performing musical styles other than those in classical guitar. Included are plectrum styles such as bluegrass, country and rock, as well as flamenco, folk, popular and jazz.
- 371 ANALYTICAL TECHNIQUES** *2 credits*  
Prerequisite: 252. Techniques for analysis of musical score from all eras of Western music history, with major emphasis on works of Baroque, Classical and Romantic periods.
- 372 TECHNIQUES FOR THE ANALYSIS OF 20TH CENTURY MUSIC** *2 credits*  
Prerequisite: 252. Techniques for the analysis of musical scores from the 20th Century. Required of a theory-composition major.

- 407 JAZZ ARRANGING AND SCORING** 2 credits  
Prerequisite: 454 and 309. Study of jazz instrumentation from small groups to large ensembles.
- 432/532 TEACHING AND LITERATURE: PERCUSSION INSTRUMENTS** 2 credits  
To train undergraduate and graduate percussion students in techniques of percussion education. Emphasis on research, literature, performance, and techniques from elementary through secondary levels.
- 451/551 INTRODUCTION TO MUSICOLOGY** 2 credits  
Prerequisite: 352. Comparative musicology; acoustics; psychology and physiology of music; aesthetics; theory of music theory; historical musicology.
- 452 COMPOSITION** 2 credits  
Prerequisite: 252 or permission of instructor. Study and creative use of major styles and idioms of musical composition; emphasis on 20th-Century techniques.
- 453/553 MUSIC SOFTWARE SURVEY AND USE** 2 credits  
Prerequisite: 152 or permission of instructor. A survey and evaluation of available software in the various forms of musical instruction. Students will design a course suitable for submission to a programmer.
- 454 ORCHESTRATION** 2 credits  
Prerequisite: 252. Theory of instrumentation ranging from small ensembles to full band and orchestras.
- 455/555 ADVANCED CONDUCTING: INSTRUMENTAL** 2 credits (30 clinical hours)  
Baton techniques and problems relating to practice, reading and preparation of scores; organization of ensembles; programming; conducting large instrumental ensembles. One hour lab required.
- 456/556 ADVANCED CONDUCTING: CHORAL** 2 credits  
Prerequisite: 351 or equivalent. Conducting techniques to the choral ensemble, including leadership, error detection, tonal development, stylistic accuracy and analysis. One hour lab required.
- 462/562 REPERTOIRE AND PEDAGOGY: ORGAN** 3 credits  
Prerequisite: permission of instructor. Survey of organ literature of all eras and styles, and of methods of teaching organ, applying principles to literature.
- 463/563 REPERTOIRE AND PEDAGOGY: STRING INSTRUMENTS** 3 credits  
Prerequisite: permission of instructor. Study in depth of the four bowed string instruments, their teaching and close relationship. Despite obvious difference in physical application of cello and bass from violin and viola, methods of bowing, sound production and coloring are closely related. Application of the instruments to solo, chamber and orchestral playing.
- 467/567 GUITAR PEDAGOGY** 2 credits  
Prerequisite: permission of instructor. A systematic analysis of prevailing schools of guitar pedagogy. Sound production physiology, method books and special problems in teaching addressed.
- 468/568 GUITAR ARRANGING** 2 credits  
Prerequisite: permission of instructor. After comparative analyses of selected examples, students make original solo guitar arrangements of works written for other solo instruments and ensembles.
- 469/569 HISTORY AND LITERATURE OF THE GUITAR AND LUTE** 2 credits  
Prerequisite: permission of instructor. Study of plucked, fretted, string instruments from the 14th Century to the present: construction, notation, literature and performance practices. Modern editions and recordings evaluated.
- 471 COUNTERPOINT** 2 credits  
Prerequisite: permission of instructor. Designed to give student of theory-composition necessary knowledge and skills for understanding contrapuntal practices and procedures; emphasis on 20th-Century techniques.
- 472 ADVANCED ORCHESTRATION** 2 credits  
Prerequisite: 454. Study of techniques of orchestral style as found in major works from classical orchestra of Haydn and Mozart through modern orchestra of Stravinsky, Bartok, Berg and Schoenberg.
- 490/590 WORKSHOP IN MUSIC** 1-3 credits  
Prerequisite: permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.
- 491 SPECIAL TOPICS IN MUSIC** 2 credits  
(May be repeated for a total of four credits) Group project related to a specific phase of music. Experimental course topics designed and implemented according to student interest. For elective credit only.
- 482 SENIOR SEMINAR** 1 credit  
Prerequisite: restricted to students enrolled in Student Teaching in Music. For music education majors; certification, contracts, benefits, job market prospects and student teaching experience sharing.
- 487 INDEPENDENT STUDY IN MUSIC** 1-2 credits  
(May be repeated for a total of four credits) Prerequisites: senior standing and permission of department head. Music major only. Independent study under supervision of specially selected faculty members in subject area bearing on student's own goals.
- 498 SENIOR HONORS PROJECT: MUSIC** 1-3 credits  
(May be repeated for a total of six credits) Individually designed project demonstrating scholarship, analysis, advanced musicianship, research and/or creativity according to student interest. Restricted to University honors music student.
- 103 UNIVERSITY SYMPHONY ORCHESTRA** 1 credit  
Membership by audition. Organization devoted to study of orchestral literature. Full-length concerts as well as special University appearances. Major conducted ensemble.
- 104 SYMPHONIC BAND** 1 credit  
Membership by audition. The University Symphonic Band is the most select band at the University and performs the most demanding and challenging music available.
- 105 VOCAL CHAMBER ENSEMBLE** 1 credit  
Membership open to those enrolled in applied voice study. Coaching and rehearsal of solo and ensemble literature for voices from operatic, oratorio and lieder repertoires.
- 106 BRASS ENSEMBLE** 1 credit  
Membership by audition. Study and performance of literature for brass ensemble from all periods of music history. Frequent public concerts. For advanced brass players.
- 107 STRING ENSEMBLE** 1 credit  
Membership by audition. In-depth study of performance of chamber music literature with special emphasis on string quartet and piano trio.
- 108 OPERA WORKSHOP** 1 credit  
Membership by audition. Musical and dramatic group study of excerpts from operatic repertoire. Includes annual production of standard opera and/or contemporary chamber work with staging, costumes and scenery.
- 109 PERCUSSION ENSEMBLE** 1 credit  
Membership by audition. Study and performance of literature for various percussion groups; develops skill in ensemble performance.
- 110 WIND CHOIR** 1 credit  
Membership by audition. Study, reading, and performance of major orchestral and serenade repertoire for wind instruments.
- 111 CHAMBER ORCHESTRA** 1 credit  
Membership by audition. Organization designed to study for performance the substantial repertoire for small orchestra. Open to student of advanced ability.
- 114 KEYBOARD ENSEMBLE** 1 credit  
Involves three hours a week of accompanying. Keyboard major required to enroll for at least three years. Music education major may substitute another musical organization for one year.
- 115 JAZZ ENSEMBLE** 1 credit  
Membership by audition. Provides experience in jazz ensemble performance. Student is assumed to have knowledge of rudiments of music and some experience in jazz performance.
- 116 GUITAR ENSEMBLE** 1 credit  
Membership by audition. Provides experience in conducted ensemble performance for guitarists. Major conducted ensemble.
- 117 COLLEGIUM MUSICUM** 1 credit  
Prerequisite: permission of instructor. A musical ensemble that performs music written before 1750 on copies of authentic instruments.
- 118 SMALL ENSEMBLE MIXED** 1 credit  
Chamber Ensemble, Baroque Ensemble and Contemporary Music Ensemble. Each is a group of diverse instruments which rehearses and performs a selected body of music.
- 119 UNIVERSITY CHORAL UNION** 1 credit  
Membership by audition. Ensemble devoted to study and performance of choral masterworks. Registration for credit open to all students who are not vocal music majors.
- 120 CONCERT CHOIR** 1 credit  
Membership by audition. Highly select mixed choir. Performs classical literature from all periods. Campus, regional, and tour performances. "Major conducted ensemble" for vocal majors.
- 121 UNIVERSITY SINGERS** 1 credit  
Membership by audition. Mixed ensemble devoted to performance of a wide variety of choral literature from classical to popular. "Major conducted ensemble" for vocal majors.
- 122 FRESHMAN CHORALE** 1 credit  
Open to freshman students by audition. Devoted to performance of choral literature and development of vocal/musical skills. "Major conducted ensemble" for vocal majors.
- 123 MADRIGAL SINGERS** 1 credit  
Membership by audition. Ensemble devoted to performance of vocal chamber music of the Renaissance. Presents madrigal feasts and concerts on and off campus. Fall semester.
- 124 OPERA CHORUS** 1 credit  
Open to students and members of University community by audition. Rehearsal and production of opera and musical theatre literature with staging, costumes, and scenery.
- 125 CONCERT BAND** 1 credit  
Membership by audition. This ensemble performs the finest literature available for concert bands today.
- 126 MARCHING BAND** 1 credit  
Enrollment is open to all members of the University student body. This organization is noted for its high energy performances at University football games.
- 127 BLUE AND GOLD BRASS** 1 credit  
Membership by audition. The official band for Akron home basketball games.
- 128 UNIVERSITY BAND** 1 credit  
This ensemble is active during Spring Semester only, and is open to all members of the University community.
- 421/521 GUITAR CHAMBER MUSIC** 1 credit  
Prerequisite: Open to all upper class instrumentalists and vocalists. Guitarists must have taken Guitar Ensemble, 7510:116. Study, coaching, and performance of major works for guitar with other instruments or voice. Major conducted ensemble for guitar majors.

## MUSICAL ORGANIZATIONS

### 7510:

- 102 AKRON SYMPHONY CHORUS** 1 credit  
Open to University and community members by audition. Prospective members should contact School of Music two weeks before semester begins. Performs with Akron Symphony Orchestra.

## APPLIED MUSIC

### 7520:

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition.

**021-89 APPLIED MUSIC FOR NONMAJORS** *2-4 credits each*  
Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

021 PERCUSSION	037 OBOE/ENGLISH HORN
022 CLASSICAL GUITAR	038 CLARINET/BASS CLARINET
023 HARP	039 BASSOON/CONTRABASSOON
024 VOICE	040 SAXOPHONE
025 PIANO	041 HARPSICHORD
026 ORGAN	042 COMPOSITION
027 VIOLIN	061 JAZZ PERCUSSION
028 VIOLA	062 JAZZ GUITAR
029 CELLO	063 JAZZ ELECTRIC BASS
030 STRING BASS	064 JAZZ PIANO
031 TRUMPET/CORNET	065 JAZZ TRUMPET
032 FRENCH HORN	066 JAZZ TROMBONE
033 TROMBONE	067 JAZZ SAXOPHONE
034 BARITONE	068 JAZZ COMPOSITION
035 TUBA	069 JAZZ VOCAL STYLES
036 FLUTE/PICCOLO	

**121-469/521-569 APPLIED MUSIC FOR MUSIC MAJORS** *2 or 4 credits each*  
The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

121-221-321-421/521 PERCUSSION
122-222-322-422/522 CLASSICAL GUITAR
123-223-323-423/523 HARP
124-224-324-424/524 VOICE
125-225-325-425/525 PIANO
126-226-326-426/526 ORGAN
127-227-327-427/527 VIOLIN
128-228-328-428/528 VIOLA
129-229-329-429/529 CELLO
130-230-330-430/530 STRING BASS
131-231-331-431/531 TRUMPET OR CORNET
132-232-332-432/532 FRENCH HORN
133-233-333-433/533 TROMBONE
134-234-334-434/534 BARITONE
135-235-335-435/535 TUBA
136-236-336-436/536 FLUTE OR PICCOLO
137-237-337-437/537 OBOE OR ENGLISH HORN
138-238-338-438/538 CLARINET OR BASS CLARINET
139-239-339-439/539 BASSOON OR CONTRABASSOON
140-240-340-440/540 SAXOPHONE
141-241-341-441/541 HARPSICHORD

**142-242-342-442/542 PRIVATE LESSONS IN MUSIC COMPOSITION** *2-4 credits each*  
(May be repeated) Prerequisites: 7500:252 and permission of instructor; 7500:452 recommended. Private instruction in composition. Primarily for student whose major is theory-composition.

161-261-361-461 JAZZ PERCUSSION
162-262-362-462 JAZZ GUITAR
163-263-363-463 JAZZ ELECTRIC BASS
164-264-364-464 JAZZ PIANO
165-265-365-465 JAZZ TRUMPET
166-266-366-466 JAZZ TROMBONE
167-267-367-467 JAZZ SAXOPHONE
168-268-368-468 JAZZ COMPOSITION
169-269-369-469/569 JAZZ VOCAL STYLES

## COMMUNICATION

### 7600:

<b>102 SURVEY OF MASS COMMUNICATION</b>	<i>3 credits</i>
Considers entire field of contemporary American mass communication. Presents and explains functions of agencies through which news, views and entertainment reach the general public.	
<b>105 INTRODUCTION TO PUBLIC SPEAKING</b>	<i>3 credits</i>
Introduction to principles and practice of speaking by reading examples of speeches, studying techniques and methods employed and applying them in a variety of speaking situations.	
<b>106 EFFECTIVE ORAL COMMUNICATION</b>	<i>3 credits</i>
Principles of communication in speaker-audience, group and informal settings, and application of the principles in speeches, group discussions and other oral and written assignments.	
<b>115 SURVEY OF COMMUNICATION THEORY</b>	<i>3 credits</i>
Presents models of major forms of speech communication and discusses elements of models, their interaction and their function in the human communication system.	
<b>200 CAREERS IN COMMUNICATION</b>	<i>1 credit (credit/noncredit)</i>
A survey of career opportunities in the communication field. Outside speakers; field trips.	
<b>201 NEWS WRITING</b>	<i>3 credits</i>
Prerequisite: ability to type. Writing of news stories; applying theory through discussions, illustrative material; actual writing for publication.	
<b>206 FEATURE WRITING</b>	<i>3 credits</i>
Prerequisite: 201. Short newspaper and magazine articles, preparation of articles for publication, human interest situations, extensive writing with class discussion.	
<b>225 LISTENING</b>	<i>1 credit</i>
Techniques and approaches involved in understanding the listening process and practice of listening improvement techniques.	
<b>226 INTERVIEWING</b>	<i>3 credits</i>
Study and practical application of selected interviewing concepts associated with job interviewing, journalistic interviewing, and life review interviewing.	
<b>227 NONVERBAL COMMUNICATION</b>	<i>3 credits</i>
Focused study of the principal aspects of nonverbal communication in public, group and interpersonal settings.	
<b>230 WZ-FM*</b>	<i>1 credit</i>
<b>231 FORENSICS*</b>	<i>1 credit</i>
<b>232 BUCHTELITE*</b>	<i>1 credit</i>
<b>233 TEL-BUCH*</b>	<i>1 credit</i>
<b>235 INTERPERSONAL COMMUNICATION</b>	<i>3 credits</i>
Theory and practice in interpersonal communication concepts and principles. Special topics in communication apprehension, assertive communication, communication dyads and triads, and transactional communication.	
<b>245 ARGUMENTATION</b>	<i>3 credits</i>
Study of process of developing, presenting and defending inferences and arguments in oral communication setting. Includes study and practice of evidence, reasoning, case construction, refutation and rebuttal.	
<b>252 PERSUASION</b>	<i>3 credits</i>
Emphasis on understanding persuasion theory and practice. Includes information analysis of motivational appeals and introduction to propaganda analysis.	
<b>270 VOICE TRAINING FOR MEDIA</b>	<i>3 credits</i>
Safe and effective uses of the vocal instrument in its specific application to radio, television and films.	
<b>280 MEDIA PRODUCTION TECHNIQUES</b>	<i>3 credits</i>
Introduction to production techniques used in the mass communication covers sound, image, lighting, fundamentals of conveying messages on slide, film and video.	
<b>282 RADIO PRODUCTION</b>	<i>3 credits</i>
Study of radio production techniques and the functional operation of AM and FM radio stations. Includes practical production experience in studio.	
<b>283 TELEVISION PRODUCTION</b>	<i>3 credits</i>
Prerequisite: 280. Function, structure and influence of television as communication medium with practical production experience in studio.	
<b>288 FILM PRODUCTION</b>	<i>3 credits</i>
Prerequisite: 280. Techniques, limitations and potentials of film production. A student learns script writing, directing, lighting and makeup; practical production experience in studios and on location.	
<b>301 ADVANCED NEWS WRITING</b>	<i>3 credits</i>
Prerequisite: 201. Advanced course in writing and editing news, features and analysis for print media. Behavioral approach to communication of information and ideas.	
<b>302 BROADCAST NEWSWRITING</b>	<i>3 credits</i>
Prerequisites: 201, 280. The course is designed to teach students how to write, prepare, and deliver broadcast news copy for radio and television.	
<b>303 PUBLIC RELATIONS WRITING</b>	<i>3 credits</i>
Prerequisites: 201, ability to type. Introduction of writing skills required by public relations practitioners emphasizing different approaches for specific publics and specific media.	
<b>304 EDITING</b>	<i>3 credits</i>
Prerequisite: 201. Copyreading, headline writing, proofreading, makeup, type and typography, printing machines and processes, newspaper methods and systems.	

\* Total repeats not to exceed eight credits.

(Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

- 306 MAGAZINE WRITING** 3 credits  
Prerequisites: 201, 206. An advanced writing course designed to develop the specialized researching, reporting, and writing skills needed in consumer and specialized business magazines today.
- 307 COMMERCIAL ELECTRONIC PUBLISHING** 3 credits  
Prerequisite: 201. Explore basic principles of magazine publishing in its broad definition, layout, type and typography, print production of magazines.
- 309 PUBLIC RELATIONS PUBLICATIONS** 3 credits  
Prerequisites: 201 and 303. Preparation of publications used as communication tools in public relations, advertising and organizations. Emphasis upon design, layout and technology.
- 325 INTERCULTURAL COMMUNICATION** 3 credits  
Study of effect on oral communication process of existence of cultural barriers. Includes study of verbal and nonverbal communication in transracial, informal international and diplomatic communicative settings.
- 344 GROUP DECISION MAKING** 3 credits  
Study of communication and decision making in small groups. Practice in techniques of group decision-making. Introduction to theory of group communication.
- 345 BUSINESS AND PROFESSIONAL SPEAKING** 3 credits  
Prerequisite: 7600:105 or 106. Practical improvement in speaking skills used in business settings.
- 346 ADVANCED PUBLIC SPEAKING** 3 credits  
Prerequisite: 7600:105 or 106. Theory and practice of public speaking; audience analysis; advanced methods for organizing persuasive speeches; techniques of research, style, and delivery; professional speech writing; extensive speaking practice.
- 365 FREEDOM OF SPEECH** 3 credits  
Discussion and analysis of the Constitution's free speech guarantee; contemporary issues in freedom of communication; role of the media in free speech issues.
- 361 AUDIO RECORDING TECHNIQUES** 3 credits  
Prerequisite: 280 and permission. Basic principles of sound, human hearing, and the techniques of audio recording. Theory and laboratory training, recording practice in the studio and on location. Lab fee.
- 362 VIDEO CAMERA AND RECORDING** 3 credits  
Prerequisite: 280. Principles of electronic image recording; studio and field camera operation; studio and field location lighting practice.
- 383 ADVANCED TELEVISION PRODUCTION** 3 credits  
Prerequisite: 283 and permission. Television production operations in a studio environment. Practice producing and directing. Studio equipment operation. Lab fee.
- 384 COMMUNICATION RESEARCH** 3 credits  
Prerequisites: 102, 115. Fundamental concepts and methods of survey research, and the application and interpretation of survey data in communication and in media operations.
- 385 AMERICAN FILM HISTORY: THE BEGINNING TO 1945** 3 credits  
Acquaints undergraduate student with historical developments of film and film concepts; ends with films of 1945.
- 386 AMERICAN FILM HISTORY: 1945 TO THE PRESENT** 3 credits  
Continuation of student's survey of film history and film concepts begun in 385.
- 387 RADIO AND TV WRITING** 3 credits  
Practical application of script writing principles and techniques used in writing scripts for commercials, announcements, comedy/drama, news and documentaries.
- 388 HISTORY AND STRUCTURE OF BROADCASTING** 3 credits  
Growth of broadcasting in America; historical evolution of approaches to programming, news and financing of broadcasting operations.
- 395 RADIO STATION PROGRAMMING AND OPERATIONS** 3 credits  
History and development of radio programming from early formation to present; nature, structure and function of educational and commercial radio broadcasting.
- 396 TELEVISION STATION PROGRAMMING AND OPERATIONS** 3 credits  
Examines the operations and programming processes of a broadcast station; programming philosophies, broadcast schedules, feature and syndication acquisition, local productions, issues of staffing and funding.
- 400/500 HISTORY OF JOURNALISM IN AMERICA** 3 credits  
A review and analysis of the historical evolution of journalism in America, focusing primarily on newspapers, magazines, radio, television.
- 403 PUBLIC RELATIONS STRATEGIES** 3 credits  
Prerequisites: 201, 303, and 309. Selected communication theories used to analyze and implement effective public relations programs with emphasis placed upon research, planning, promotional messages and evaluation of program.
- 404 PUBLIC RELATIONS CASES** 3 credits  
Prerequisites: 303, 309, and 403. Continuation of 403. Application of principles of public relations profession in an actual organizational setting.
- 405 MEDIA COPYWRITING** 3 credits  
Prerequisite: 309. Selected communication theories and research techniques used to plan, write and analyze commercial messages. Emphasis will be placed on selection of audience, medium, appeal, writing style and evaluation of efforts.
- 408/508 WOMEN, MINORITIES AND NEWS** 3 credits  
Study of images of women in U.S. news, along with the power women and minorities have as decision-makers in the news industry.
- 410 JOURNALISM MANAGEMENT** 3 credits  
This course is designed to educate students in the management of journalistic operations, including the magazine and newspaper industries.
- 435/535 COMMUNICATION IN ORGANIZATIONS** 3 credits  
Prerequisite: 345 or permission. Overview of theories and approaches for understanding communication flow and practices in organizations, including interdepartmental, networks, superior-subordinate, formal and informal communication.
- 436/536 ANALYZING ORGANIZATIONAL COMMUNICATION** 3 credits  
Prerequisites: 344, 384 and 435. or permission. Methodology for in-depth analysis and application of communication in organizations; team building; conflict management, communication flow. Individual and group projects; simulations.
- 437 TRAINING METHODS IN COMMUNICATION** 3 credits  
Prerequisite: 345 or permission. Principles and concepts in the design and delivery of communication training programs; integration of theory and methodology; presentation skills; matching methods and learner needs.
- 439 INDEPENDENT STUDY** 1-12 credits  
(May be repeated for a total of 12 credits) Prerequisite: permission of faculty. Directed independent readings, research, projects and productions. Written proposal must be submitted before permission is granted. Appropriate documentation of work required.
- 450 SPECIAL TOPICS IN COMMUNICATION** 3 credits  
(May be repeated for a total of nine credits) Special interest topics in mass communication, journalism, or communication, supplementing courses listed in University Bulletin. See department for current listing of offerings.
- 454/554 THEORY OF GROUP PROCESSES** 3 credits  
Group communication theory and conference leadership as applied to individual projects and seminar reports.
- 457/557 PUBLIC SPEAKING IN AMERICA** 3 credits  
Survey and critical analysis of major speakers, speeches and speech movements in American history. Examines how style and content of American speaking influenced events and reflected their times.
- 463/563 CORPORATE VIDEO DESIGN** 3 credits  
Prerequisites: 201, 280. Client contact, analysis of production problems, design and writing of scripts for promotion, training, and news in corporate and health service settings.
- 464/564 CORPORATE VIDEO MANAGEMENT** 3 credits  
Prerequisite: 463. Budgeting for individual productions and production facilities, scheduling, script breakdown, management of corporate and health service media facilities.
- 466/566 AUDIO AND VIDEO EDITING** 3 credits  
Prerequisite: 280. Theory and practice of editing audio and video for broadcast and corporate applications.
- 467/567 DIRECTING VIDEO PRODUCTIONS** 3 credits  
Prerequisite: 280 and permission. Script analysis, casting, principles of directing, directing non-professional talent. Laboratory exercises.
- 470 ANALYSIS OF PUBLIC DISCOURSE** 3 credits  
Identifies principal textual and contextual elements of public discourse and presents various theories and models to be applied in studying rhetorical acts.
- 471/571 THEORIES OF RHETORIC** 3 credits  
Study of key figures in history of rhetorical theory, stressing interrelationships among theories of rhetoric, intellectual climates and social climates.
- 480 COMMUNICATION INTERNSHIP** 1-8 credits  
(May be repeated for a total of eight credits) Prerequisites: 24 credits in departmental courses, 2.5 overall GPA, and permission. Provides student with supervised experience and on-the-job training. Written permission must be obtained from the department prior to the term for which credit is to be received.
- 484 REGULATIONS IN MASS MEDIA** 3 credits  
Concentration on government regulations and self-regulatory bodies in broadcasting, film and print media.
- 485 SENIOR HONORS PROJECT IN COMMUNICATION** 1-6 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program; approval of honors preceptor. Independent study project leading to completion of senior honors thesis or other original work.
- 486 BROADCAST SALES AND MANAGEMENT** 3 credits  
Prerequisite: 384. Using simulation and case history techniques, this course examines the sales and decision-making processes of a broadcast station.
- 487/587 THE AMERICAN FILM INDUSTRY** 3 credits  
History, current operation and possible futures of the American film industry. Business and industrial aspects of film considered in relation to technological and social change.
- 488/588 ADVANCED FILM PRODUCTION** 3 credits  
Prerequisite: 288. Advanced study in film. Includes study of 35 mm, 16 mm, and Super-8mm color and black and white, sound on film. Emphasis on individual production.
- 489/589 DOCUMENTARY FORM IN FILM AND TELEVISION** 3 credits  
Historical and critical study of documentary and nonfiction forms in film and television with an analysis of their roots in photography and radio. Emphasis on American film and TV.
- 490/590 COMMUNICATION WORKSHOP** 1-3 credits  
(May be repeated for a total of six credits) Group study or group projects investigating a particular phase of media not covered by other courses in curriculum.
- 492/592 CORPORATE VIDEO PRACTICUM** 2-6 credits (repeatable to 6 hours)  
Prerequisite: permission. Practical applications of writing, directing, management, recording, and editing skills to problems in business, education, and health services. Lab fee.

# COMMUNICATIVE DISORDERS

## 7700:

- 101 BEGINNING SIGN LANGUAGE I** 3 credits  
Introduction to manual communication: Vocabulary building; development of fingerspelling skills and expressive/receptive sign language skills.
- 102 BEGINNING SIGN LANGUAGE II** 3 credits  
Prerequisite: 101. Introduction to manual communication: Vocabulary building; development of fingerspelling skills and expressive/receptive sign language skills.
- 110 INTRODUCTION TO DISORDERS OF COMMUNICATION** 3 credits  
Overview of various types of speech disorders; their incidence, etiology and characteristics. Basic concepts and principles underlying speech pathology.
- 111 INTRODUCTION TO PHONOLOGY** 2 credits  
Introduction to international phonetic alphabet, and overview of articulatory phonetics.
- 120 INTRODUCTION TO AUDIOLOGY/AURAL REHABILITATION** 4 credits  
(Not open to communicative disorder major) Introduction to field of audiology including physics of sound, anatomy and physiology of auditory system, measurement of hearing impairment, nature and causes of hearing disorders and habilitation of persons with hearing impairment.
- 121 PSYCHO SOCIAL ASPECTS OF DEAFNESS** 2 credits  
The effects of deafness on the emotional, social, motor and intellectual development of the individual; the effects of deafness on interpersonal relationships.
- 130 BASES AND STRUCTURE OF LANGUAGES** 3 credits  
Introduction to linguistic bases of speech and language: phonological, morphological, syntactical and semantic. Social and psychological variables in communicative process as applied to therapeutic environment presented.
- 140 INTRODUCTION TO HEARING SCIENCE** 3 credits  
Normal anatomy and physiology of hearing system and acoustics of hearing. Survey of field of audiology. Nature of hearing problems.
- 201 INTERMEDIATE SIGN LANGUAGE** 3 credits  
Prerequisite: 102. Vocabulary expansion; emphasis on expressive/receptive communication, fingerspelling, and fluency.
- 202 ADVANCED SIGN LANGUAGE** 3 credits  
Prerequisite: 201. Further practice in developing expressive/receptive skills including rhythm, speed, and fluency: Study of linguistic aspects of various manual communication systems.
- 210 APPLIED PHONOLOGY** 3 credits  
Prerequisite: 111. Training in allophonic transcription. Analysis of sound substitutions, distortions and dialectal variations. Study of Distinctive Feature Systems.
- 211 INTRODUCTION TO SPEECH SCIENCE** 2 credits  
Study of anatomical, physiological and physical principles involved in production, transmission and reception of speech signal.
- 222 SURVEY OF DEAF CULTURE IN AMERICA** 2 credits  
The deaf experience in America including educational, legal, social, and occupational developments.
- 230 SPEECH AND LANGUAGE DEVELOPMENT** 3 credits  
Prerequisite: 130 or permission. Study of language development including acquisition of comprehension and production of phonology, syntax and semantics. Approaches to use of language in learning and thinking.
- 240 AURAL REHABILITATION** 4 credits  
Prerequisite: 140. Introduction to philosophy and methods of aural rehabilitation for children and adults. Includes methods of speech reading, auditory training, speech conservation, hearing aid use and combined visual and auditory approaches.
- 241 PRINCIPLES OF AUDIOMETRY** 3 credits  
Prerequisite: 140. Introduction to psychoacoustic principles which underlie basic audiometric tests; principles of speech audiometry, masking and impedance audiometry.
- 250 OBSERVATION AND CLINICAL METHODS** 2 credits  
Corequisites: 240 or 321 or 330. Introduction to clinical procedures. Analyses of preparation and structure necessary for successful therapy; observation of therapy in different settings.
- 321 COMMUNICATIVE DISORDERS I** 4 credits  
Prerequisites: 110, 210. Study of disorders of articulation/phonology, including normal phonological developments, and assessment and remediation of phonological disorders. Introduction to disorders related to velopharyngeal inadequacy.
- 322 COMMUNICATIVE DISORDERS II** 4 credits  
Prerequisites: 110, 3100:264. Surveys communication disorders that accompany acquired neurological impairments and neurodevelopmental syndromes. Introduces neurological and genetic models, classification systems, diagnostic and treatment procedures.
- 330 LANGUAGE DISORDERS** 4 credits  
Prerequisite: 230. Etiology, identification, evaluation, intervention, remediation of symbolic, cognitive, interpersonal language disorders of children. Disorders viewed as correlates or sequelae of central nervous system dysfunction or emotional disturbance.
- 340 AUDIOLOGIC EVALUATION** 2 credits  
Prerequisite: 241. "Test battery" approach to audiometry explored; techniques of case finding and handling of difficult-to-test cases; competency with all tests in the battery required.
- 350 CLINICAL PRACTICUM: ARTICULATION/PHONOLOGY** 1 credit  
(Must be repeated for a total of two credits) Prerequisites: 250, 321. Supervised clinical practicum in articulation/phonology. Emphasizes therapy procedures, diagnostic techniques, and report preparation.

- 351 CLINICAL PRACTICUM: LANGUAGE** 1 credit  
Prerequisites: 250, 330. Supervised clinical practicum in language. Emphasizes therapy procedures, diagnostic techniques, and report preparation.
- 352 CLINICAL PRACTICUM: AURAL REHABILITATION** 1 credit  
(Must be repeated for a total of two credits) Prerequisites: 240, 250. Supervised clinical practicum in hearing rehabilitation. Emphasizes therapy procedures, diagnostic techniques, and report preparation.
- 430/530 ASPECTS OF NORMAL LANGUAGE DEVELOPMENT** 3 credits  
(Not open to communicative disorders major) Introduction to acquisition and development of comprehension and production of language phonologically, semantically and syntactically. Relates language acquisition to perceptual development of child and looks at function of language in individual, family and school.
- 440/540 AUGMENTATIVE COMMUNICATION** 3 credits  
Prerequisites: 330 or 430/530 or permission of instructor. Overviews augmentative communication systems—candidates, symbol systems, devices, vocabulary, funding. Considers interdisciplinary issues in assessment/intervention.
- 450 ASSESSMENT OF COMMUNICATIVE DISORDERS** 3 credits  
Prerequisite: senior status; 321, 330 and 350, or permission. Introduction to differential diagnosis of communicative disorders. Emphasizes taking case histories, and administration and interpretation of tests and procedures.
- 451 CLINICAL PRACTICUM: DIAGNOSTIC AUDIOLOGY** 1 credit  
(Must be repeated for a total of two credits) Prerequisites: 250, 340. Supervised clinical practicum in hearing diagnostics. Emphasizes diagnostic procedures and report preparation.
- 460/560 SPEECH-LANGUAGE AND HEARING DISORDERS IN THE PUBLIC SCHOOLS** 2 credits  
(Not open to communicative disorders major) Nature, causes and treatment of speech, hearing and language disorders in public schools. Special reference to role of classroom teacher in identifying and referring student with suspected problems and in working with school clinician.
- 461/561 ORGANIZATION AND ADMINISTRATION: PUBLIC SCHOOL SPEECH-LANGUAGE AND HEARING PROGRAMS** 2 credits  
Prerequisites: Senior or graduate standing. For clinicians who plan to work in public school systems. Covers program requirements and professional/ethical issues imposed by PL 94-142.
- 480 SEMINAR IN COMMUNICATIVE DISORDERS** 2 credits  
Prerequisite: senior standing. Provides a vehicle for detailed study and discussion of various communicative disorders.
- 481 SPECIAL PROJECTS: COMMUNICATIVE DISORDERS** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission of instructor. Individual or group projects related to any of the problems of communicative disorders.
- 483/583 COMMUNICATION DISORDERS: GERIATRIC POPULATION** 3 credits  
(Not open to communicative disorders major) Examination of communication disorders that exist in geriatric population. Focus on etiology, symptomatology and concomitant rehabilitative procedures. Designed for a student interested in the aging population.
- 485/585 COMMUNICATIVE DISORDERS IN THE DEVELOPMENTALLY DISABLED** 4 credits  
Theory and current research related to the etiology, diagnosis and remediation of communicative disorders in intellectually and/or neuromotorically delayed children.
- 490/590 WORKSHOP: COMMUNICATIVE DISORDERS** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Group investigation of particular phase of speech pathology and/or audiology not offered by other courses.
- 495 INTERNSHIP: SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY** 3-6 credits  
Prerequisite: permission of director of Speech and Hearing Center. Affords opportunity for in-depth clinical experience in variety of clinical settings outside The University of Akron Speech and Hearing Center. On-the-job experience with specialized case populations.
- 496 SENIOR HONORS PROJECT: SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: enrollment in the Honors Program, senior standing and major in communicative disorders.

## SOCIAL WORK

### 7750:

- 270 POVERTY IN THE UNITED STATES** 3 credits  
Survey of social and personal dimensions of life in the inner city and other areas of poverty in United States. For person wishing to develop an in-depth understanding and/or intending to work in such areas.
- 276 INTRODUCTION TO SOCIAL WELFARE** 4 credits  
Survey of field of social welfare; place of social work profession within human services institutions of United States. Introduction of basic concepts relating social welfare institutions and social work to society.
- 401/501 SOCIAL WORK PRACTICE I** 3 credits  
Prerequisite: Social Work major; Corequisite 410. Basic concepts and methods of Generalist social work practice, with an emphasis on understanding and working with individuals.
- 402/502 SOCIAL WORK PRACTICE II** 3 credits  
Prerequisite: 401; Corequisite 410; or permission of instructor. Concepts and methods of social work practice particularly relating to understanding and working with groups in various settings in our society.
- 403/503 SOCIAL WORK PRACTICE III** 3 credits  
Prerequisite: 401 and 410, or permission of instructor. Development of understanding and practice methods for utilization of community organization and social planning as social work process in assessing problems and developing program to meet needs.

- 404/504 SOCIAL WORK PRACTICE IV** 3 credits  
Prerequisite: 401, 410, or permission of instructor. Professional social work practice with families in social services; the dynamics of family systems, assessment of family function and dysfunction, professional helping processes.
- 410/510 MINORITY ISSUES IN SOCIAL WORK PRACTICE** 3 credits  
Prerequisite: Social Work major, Corequisite 401, permission of instructor. Racial, ethnic and cultural issues in social work related to various practice and theoretical perspectives, to various types of social problems, service agencies, individual family, group, community and societal contexts integrated with the methodological processes of the social work practitioners.
- 411/511 WOMEN'S ISSUES IN SOCIAL WORK PRACTICE** 3 credits  
Prerequisite: 401 or permission of instructor. Social work practice, knowledge and skill, social welfare institutions and social policy in relation to women's issues and concerns in the United States.
- 421 INTRODUCTION TO THE FIELD EXPERIENCE** 1 credit  
Prerequisites: 401, 410, and permission of instructor; corequisite: 495. Assists students in making the transition from classroom learning to experiential learning in the field practicum.
- 422 FIELD EXPERIENCE SEMINAR** 1 credit  
Prerequisite: 421 or permission of instructor. Assists students in integrating, synthesizing, and applying classroom knowledge to field experiences and assignments.
- 425/525 SOCIAL WORK ETHICS** 3 credits  
Prerequisite: Social Work major, permission of instructor. Social Worker's code of ethics as applied to practices, problems and issues in social work.
- 427/527 HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT I** 3 credits  
Social work perspective on human development across the life cycle. Human diversity approach consistent with the needs of social work students preparing for practice.
- 430/530 HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT II** 3 credits  
Prerequisite: Social Work major, 427, or permission of instructor. Examination of larger social systems including families, groups, neighborhoods, and organizations. Focuses on the unique systemic characteristics of each system and its development.
- 440/540 SOCIAL WORK RESEARCH I** 3 credits  
Prerequisites: Social Work major or permission of instructor. Overview of scientific inquiry and the research process as it applies to the field of social work. Emphasis is placed on the various social worker roles in relation to research.
- 441/541 SOCIAL WORK RESEARCH II** 3 credits  
Prerequisite: 440 or permission of instructor. A continuation of Social Work Research I with a focus on applying research concepts. Includes content on the evaluation of practice out comes and the use of computers in data analysis.
- 445/545 SOCIAL POLICY ANALYSIS FOR SOCIAL WORKERS** 3 credits  
Prerequisite: Social Work major, permission of instructor. Description, analysis and construction of social policy in social services; to understanding forces and processes which establish or change social policies, to predict consequences of social policies and to establish goals for social policy development; integrated into effective social work methodology.
- 450/550 SOCIAL NEEDS AND SERVICES: AGING** 3 credits  
Prerequisite: 401 or permission of instructor. Application of knowledge and principles of professional social work practice to understanding, development and provision of social services to meet needs of aging and later mature individuals, families and communities and institutions serving them and their relatives.
- 451/551 SOCIAL WORK IN CHILD WELFARE** 3 credits  
Prerequisite: 401 or permission of instructor. In-depth exploration of structure and functioning of social services designed to help children, and of practice of social work in child-welfare settings. Consideration of supportive, supplementary and substitutive services.
- 452/552 SOCIAL WORK IN MENTAL HEALTH** 3 credits  
Prerequisite: 401 or permission of instructor. Issues, organization, development and methodologies of current professional social work practice in mental-health settings.
- 454/554 SOCIAL WORK IN JUVENILE JUSTICE** 3 credits  
Prerequisite: 401 or permission of instructor. The theory and practice of social work in the juvenile justice systems of the United States. Traditional procedures and recent developments, prevention, diversion and community outreach, legal concerns, case management, institutional functioning.
- 455/555 BLACK FAMILY ISSUES** 3 credits  
Prerequisite: 401 or permission of instructor. Contemporary problems facing black families; male-female relationships, single parent households, black teens and elderly, public policy, theoretical models, explaining development of the black family.
- 456/556 SOCIAL WORK IN HEALTH SERVICES** 3 credits  
Prerequisite: 401 or permission of instructor. Policies, programs and practice in health-care settings: short-term, intermediate and long-term hospitals, out-patient services, emergency services, clinics, visiting nurse services, nursing homes, pediatric services, self-help organizations.
- 457/557 ADVANCED PRACTICE WITH INDIVIDUALS** 3 credits  
Prerequisite: 401 or permission of instructor. Advanced professional development of direct and indirect strategies and techniques of intervention to aid individuals in improving psychosocial functioning.
- 458/558 ADULT DAY CARE** 3 credits  
Prerequisite: 401 or permission of instructor. Planning, development, implementing, evaluating and delivery of adult day-care services.
- 459/559 SOCIAL WORK WITH THE MENTALLY RETARDED** 3 credits  
Prerequisite: 401 or permission of instructor. Application of social work principles in the provision of social services to meet the needs of the mentally retarded and developmentally disabled and their families.
- 465/565 ADMINISTRATION AND SUPERVISION IN SOCIAL WORK** 3 credits  
Prerequisite: 401 or permission of instructor. Preparation for use of supervision, staff development, and program planning in a social work agency. Examines the social work/welfare agency in its community as it affects its organizational goal-setting and program-implementation problems.

- 470/570 LAW FOR SOCIAL WORKERS** 3 credits  
Prerequisite: 401 or permission of instructor. Basic terminology, theories, principles, organization and procedures of law will be explored along with the relationships between social work and law and comparisons of the theoretical bases of the two professions.
- 475/575 SUBSTANCE ABUSE AND SOCIAL WORK PRACTICE** 3 credits  
Prerequisites: 401 or permission of instructor. Provides students with the essential knowledge and skill for successful social work practice with people involved in substance abuse.
- 480/580 SPECIAL TOPICS IN SOCIAL WORK AND SOCIAL WELFARE** 1-3 credits  
Prerequisite: permission of instructor. Analysis of current social work and social welfare theory and policy, settings, innovative interventions, and trends in delivery systems in relation to selected areas of concern. Topics and credits variable.
- 490/590 SOCIAL WORK WORKSHOP** 1-4 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Group investigation of a particular phase of social work or social welfare not offered by other courses in curriculum.
- 495 FIELD EXPERIENCE IN SOCIAL AGENCY** 8 credits  
(Total in consecutive semesters only) Prerequisites: 401, 410, 427, and permission of instructor; corequisites: 421 and 422 in consecutive semesters. Individual placement in selected community and social service agencies for supervised experience with individuals, groups and communities in family service, health care, corrections, community development, mental health, child welfare, public welfare and similar social welfare settings. Student must register intent and receive permission to take the course with the Field Coordinator during early part of semester preceding enrollment. For senior majors in social work.
- 497/597 INDIVIDUAL INVESTIGATION IN SOCIAL WORK** 1-3 credits  
Prerequisites: permission and prearrangement with instructor. Individual readings, research or projects in area of interest in social welfare theory or institutional operations or in social work practice under guidance of social work faculty member. Preparation of report paper appropriate to nature of topic. For social work major.
- 499 SENIOR HONORS PROJECT IN SOCIAL WORK** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor in department. Open only to social work major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work resulting in writing of research paper in proper scholarly form, supervised by student's honors project adviser within the department.

## THEATRE

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### 7800:

- 100 EXPERIENCING THEATRE** 3 credits  
Experience the theatre as a live, dynamic art form through an exposure to and participation in University productions.
- 106 INTRODUCTION TO SCENIC DESIGN** 3 credits  
Introduction to the theory of scenic design and imagery. The course may include the application of these principles to other media.
- 107 INTRODUCTION TO STAGE COSTUME TECHNIQUES** 3 credits  
Introduction to basic costume construction techniques, organization and maintenance of wardrobe for theatrical performance. Lab required.
- 145 MOVEMENT FOR ACTORS I** 3 credits  
Specialized physical training for the actor.
- 151 VOICE FOR THE STAGE** 3 credits  
Speech improvement as it specifically applies to the stage. This course is concerned with the proper techniques and principles of vocal production in their practical application to stage performance.
- 172 ACTING I** 3 credits  
Introductory fundamentals of acting through the investigation of the body as an instrument for the stage, improvisation and basic scene study.
- 205 THEATRE ORGANIZATION AND MANAGEMENT** 3 credits  
Study of successful organization and management of professional and non-professional theatre operations.
- 215 PRODUCTION AND STAGE MANAGEMENT** 3 credits  
An in-depth study of productions and stage management practices including scheduling, running rehearsals, creating a prompt book, calling shows and inter-area communications.
- 225 STAGE LIGHTING** 3 credits  
History, theories, practices, and the craft of lighting for the stage.
- 230 DEVELOPMENT OF THEATRE: HISTORY OF THE THEATRE** 3 credits  
Prerequisite: 100 or permission of instructor. Theatre history from the Greeks to the present with the emphasis on the physical theatre, stage conventions, and theatre architecture of each period.
- 245 MOVEMENT FOR ACTORS II** 3 credits  
Prerequisite: 145. Specialized training, integrating the actor's physical and vocal instrument.
- 262 STAGE MAKEUP** 3 credits  
Theory and practice in the application of stage makeup from juvenile to character. Lecture/lab-atory.
- 263 SCENE PAINTING** 3 credits  
The development of skills and knowledge of stage scenic painting required for the theatre designer and technician. Laboratory required.
- 265 BASIC STAGECRAFT I** 3 credits  
Basic stagecraft including equipment, construction and handling of two-dimensional scenery and theatrical hardware. Laboratory required.

- 206 BASIC STAGECRAFT II** 3 credits  
Prerequisite: 265. Aspects of stagecraft including the construction and handling of three-dimensional scenery and the rigging of scenic units. Laboratory required.
- 271 DIRECTING I** 3 credits  
Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, character analysis and rehearsals. One-act form emphasized.
- 301 INTRODUCTION TO THEATRE AND FILM** 3 credits  
Prerequisite: 3400:210. A survey of creative development in theatre and film. It will cover American and international developments through lecture and viewing of films. For non-majors.
- 307 ADVANCED COSTUME TECHNIQUES** 3 credits  
Prerequisite: 107. Specialized construction techniques for costumes, armor, masks, jewelry, millinery, and footwear.
- 321 MUSICAL THEATRE HISTORY II** 2 credits  
Concentrating on the twentieth century, musicals from each decade will be examined for emerging trends and styles in music, dance, theatre and libretti.
- 330 DEVELOPMENT OF THEATRE: DRAMATIC LITERATURE I** 3 credits  
Prerequisites: 230 or permission of instructor. An in-depth exploration of stage plays from the Classical Greek period to 1800, with emphasis on the relationship of plays to various cultures.
- 333 SUMMER THEATRE** 3 credits  
Prerequisites: Permission of instructor/audition. Practical laboratory experiences in one or more disciplines during the summer session doing production and/or management work. Permission only. (Repeatable to 12 credits.)
- 337 STAGE COSTUME HISTORY AND DESIGN I** 3 credits  
Prerequisites: 107, 7100:144. An introduction to Stage Costume Design through the 16th Century. Exploring design skills, historical styles and dramatic literature through costume design.
- 338 STAGE COSTUME HISTORY AND DESIGN II** 3 credits  
Prerequisite: 337. A continuation of 337 from the 17th Century to the present.
- 350 ADVANCED VOICE FOR THE STAGE** 3 credits  
Prerequisite: 151. Vocal training through interpretation and analysis of various theatre styles.
- 355 STAGE LIGHTING DESIGN** 3 credits  
Prerequisite: 225 or permission of instructor. The art and technique of stage lighting design: light plotting, color theory, and optical effects.
- 365 STAGE DESIGN** 3 credits  
Prerequisite: 106. The art of stage design: its demands, elements, principles.
- 370 THE AMERICAN THEATRE: PLAYS, PLAYERS AND PLAYWRIGHTS** 3 credits  
Study of American theatre, from its beginning in 17th Century to present, with emphasis on achievements in 20th Century.
- 371 DIRECTING II** 3 credits  
Prerequisites: 271 and permission. Advanced course in practical techniques of staging plays from major theatrical periods as well as principles of working with the actor.
- 373 ACTING II** 3 credits  
Prerequisite: 172. Continuation of 172. Further emphasis on the psychology of the actor and development of performing techniques through scene study.
- 374 ACTING III** 3 credits  
Prerequisite: 373. Further in-depth actor training with emphasis on the language and interpretation of classic plays including Shakespeare.
- 403 SPECIAL TOPICS IN THEATRE ARTS** 1-4 credits  
(May be repeated as different subject areas are covered, but no more than 10 credits may be applied toward B.A. degree) Prerequisite: permission. Traditional and nontraditional topics in theatre arts, supplementing courses listed in the General Bulletin.
- 421 MUSICAL THEATRE PRODUCTION** 3 credits  
Designed to make the theatre student aware of the total creative process involved in mounting a stage musical.
- 430 DEVELOPMENT OF THEATRE: DRAMATIC LITERATURE II** 3 credits  
Prerequisite: 330 or permission of instructor. An in-depth exploration of stage plays from the 19th Century to modern times with an emphasis on the relationship of plays to various cultures.
- 436 STYLES OF SCENIC DESIGN** 3 credits  
Prerequisite: 365. Theatrical styles and periods in scenic design and scenography.
- 460/550 PERFORMANCE PROJECTS** 3 credits  
(May be repeated for a total of six credits.) Prerequisite: permission of instructor. Preparation and presentation of programs and projects for community and campus organizations plus other projects as announced.
- 462/562 PLAYWRITING** 2 credits  
Prerequisite: permission. Principles of dramatic construction learned through analysis of playwright's art, as well as through writing of dramatic compositions by individual students.
- 467/567 CONTEMPORARY THEATRE STYLES** 3 credits  
A detailed examination of representative plays of the contemporary theatre with an emphasis on plays of the 1980s and 1990s.
- 468/568 CHILDREN'S THEATRE** 3 credits  
Study of theatre for child audience: play selection, set design and construction, acting, directing. A full-length play for children produced by the class may culminate the course.
- 470 PRACTICUM IN PRODUCTION DESIGN/TECHNOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Practice in selected production design/technology as it applies to projects in major departmental productions.
- 474 ACTING IV** 3 credits  
Prerequisite: 374. Investigation of acting styles, through scene study, applied to performance from Shakespeare through modern playwrights.
- 475/575 ACTING FOR THE MUSICAL THEATRE** 3 credits  
Prerequisites: permission of instructor. A scene study course in analyzing and performing roles in American musicals. Accompanist provided.

- 490/590 WORKSHOP IN THEATRE ARTS** 1-3 credits  
(May be repeated for a total of eight credits) Prerequisite: advanced standing or permission. Group study or group projects investigating particular phases of theatre arts not covered by other courses in curriculum.

## THEATRE ORGANIZATIONS

### 7810:

- 100 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY\*** 1 credit  
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre.
- 110 PERFORMANCE LABORATORY\*** 1 credit  
(May be repeated for a total of 12 credits) Prerequisites: permission of instructor. Provides student with practical performance experience theatre productions.
- 200 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY\*** 1 credit  
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre.
- 210 PERFORMANCE LABORATORY\*** 1 credit  
(May be repeated for a total of 12 credits) Prerequisites: permission of instructor. Provides student with practical performance experience in theatre productions.
- 300 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY\*** 1 credit  
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre.
- 310 PERFORMANCE LABORATORY\*** 1 credit  
(May be repeated for a total of 12 credits) Prerequisites: permission of instructor. Provides student with practical performance experience in theatre productions.
- 400 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY\*** 1 credit  
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre.
- 410 PERFORMANCE LABORATORY\*** 1 credit  
(May be repeated for a total of 12 credits) Prerequisite: permission of instructor. Provides student with practical performance experience in theatre productions.

## DANCE

### 7900:

- 115 DANCE AS AN ART FORM** 2 credits  
Survey of dance for novice observer: aesthetics, philosophies, methods of training. Lecture and discussion of readings, viewing of film, videotape and live performances.
- 119 MODERN I: INTRODUCTION TO MODERN DANCE I** 2 credits  
(May be repeated for a total of four credits) Exploring the basic principles of modern dance with an emphasis on body alignment and muscular awareness.
- 120 MODERN II: INTRODUCTION TO MODERN DANCE II** 2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Continuation of 119. Increasing movement vocabulary, muscular strength and coordination of modern dance.
- 124 INTRODUCTION TO BALLET I** 2 credits  
(May be repeated for a total of four credits) Emphasis on body placement, muscular awareness.
- 125 INTRODUCTION TO BALLET II** 2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Continuation of 124. Basic exercises of classical ballet.
- 130 INTRODUCTION TO JAZZ DANCE I** 2 credits  
Basic jazz dance technique and jazz dance origins.
- 144 INTRODUCTION TO TAP TECHNIQUE I** 2 credits  
Basic tap dance technique and terminology.
- 200 VIEWING DANCE** 3 credits  
Prerequisite: 3400:210. To explore dance as an art form through experiential activities, dance literature, film and live performance for non-dance majors.
- 219 MODERN III: INTERMEDIATE BEGINNER A** 2 credits  
(May be repeated for a total of four credits) Prerequisite: Permission. Continuation of 120. Introduction to current modern dance styles and techniques.
- 220 MODERN IV: INTERMEDIATE BEGINNER B** 2 credits  
(May be repeated for a total of four credits.) Prerequisite: Permission. Continuation of 219. Application of basic modern dance theory of current modern dance styles and techniques.
- 224 BALLET III: INTERMEDIATE BEGINNER A** 3 credits  
(May be repeated for a total of six credits) Prerequisite: Permission. Continuation of 125. Emphasis on barre and developing strength.
- 225 BALLET IV: INTERMEDIATE BEGINNER B** 3 credits  
(May be repeated for a total of six credits) Prerequisite: 7900:224 or permission. Continuation of 224. Emphasis on the increase of strength and flexibility.
- 230 INTRODUCTION TO JAZZ DANCE II** 2 credits  
Prerequisite: 130. Continuation of basic jazz technique and stylistic range of jazz dance.

\* Required of all theatre majors.

† Majors are required to enroll in at least one credit production lab every semester they are in residence.

**403 SPECIAL TOPICS IN DANCE** 1-4 credits  
(May be repeated as different subject areas are covered, but no more than 10 credits may be applied toward B.A. degree) Prerequisite: Permission. Traditional and non-traditional topics in dance, supplementing courses listed in General Bulletin.

**490/590 WORKSHOP IN DANCE** 1-3 credits  
(May be repeated for a total of eight credits) Prerequisite: Advanced standing or permission. Group study or group projects investigating particular phase of dance not covered by other courses in curriculum.

## DANCE ORGANIZATIONS

### 7910:

**101 CLASSICAL BALLET ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of classical ballet repertoire.

**102 CHARACTER BALLET ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of character ballet repertoire.

**103 CONTEMPORARY DANCE ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of contemporary dance repertoire.

**104 JAZZ DANCE ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of jazz dance repertoire.

**105 MUSICAL COMEDY ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of dance production numbers in a musical comedy.

**106 OPERA DANCE ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of dance sequences in an opera.

**107 EXPERIMENTAL DANCE ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of avant-garde dances.

**108 CHOREOGRAPHER'S WORKSHOP\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of student dances.

**109 ETHNIC DANCE ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of ethnic dance repertoire.

**110 PERIOD DANCE ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of dances from specific historical periods such as the Renaissance or Baroque eras.

**111 TOURING ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of any dances prepared for touring purposes.

**112 DANCE PRODUCTION ENSEMBLE\*\*** 1 credit  
By permission only. Participation in technical assistance, preparation and performance of student dance productions: theory and laboratory.

## DANCE PERFORMANCE

### 7920:

**116 PHYSICAL ANALYSIS FOR DANCE I** 2 credits  
Required for all dance majors. Recommended to be taken in first two years. Lecture/laboratory. Skeletal and muscular analysis for dance technique.

**117 PHYSICAL ANALYSIS FOR DANCE II** 2 credits  
Prerequisite: 116. Support systems, conditioning injury prevention, rehabilitation, nutrition for dancers.

**122 BALLET V: INTERMEDIATE PRINCIPLES** 5 credits  
(May be repeated for a total of 20 credits) Prerequisite: Permission. Theory, vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.

**141 POINTE I** 2 credits  
(May be repeated for a total of eight credits) Prerequisite: Permission. Reinforcement of selection principles for pointe shoes, proper holding of foot musculature and control of heel while ascending and descending from pointe.

**145 BEGINNING TAP STYLES** 2 credits  
Prerequisite: 7900:144 or permission. Refinement of Tap technique and stylistic range of Tap dance.

**222 BALLET VI: ADVANCED INTERMEDIATE TECHNIQUE** 5 credits  
(May be repeated for a total of 20 credits) Prerequisite: permission. Continuation of 122, expanding theory on vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.

**228 MODERN V: INTERMEDIATE MODERN DANCE A** 3 credits  
(May be repeated for a total of six credits) Prerequisite: Permission. The intermediate study of modern dance styles and techniques through the application of more complex movement theories, rhythmic patterns and improvisational studies.

**229 MODERN VI: INTERMEDIATE MODERN DANCE B** 3 credits  
(May be repeated for a total of six credits) Prerequisite: Permission. Introduction to intermediate theory of current modern dance styles and techniques.

**241 POINTE II** 2 credits  
(May be repeated for a total of 12 credits) Prerequisite: Permission. Continuation of 141. Continued development of strength, coordination and endurance of holding foot musculature. Further development and emphasis on principles of weight transfer.

**246 INTERMEDIATE TAP STYLES** 2 credits  
Prerequisite: 145 or permission. Advancement of Tap dance technique through the use of complex combinations, syncopation, routines, and styles.

**270 MUSICAL THEATRE DANCE TECHNIQUES** 3 credits  
Prerequisites: 7900:119, 7900:124, 7900:130, 7900:144, 7900:230. Precision, line and vernacular dance; couple and solo dance work for musical theatre.

**316 CHOREOGRAPHY I** 2 credits  
Prerequisite: Permission of the instructor. Theoretical and practical introduction to principles of choreography: space, time, energy.

**317 CHOREOGRAPHY II** 2 credits  
Prerequisite: 316 and permission. Continuation of 316. Emphasis on musical choices and finding movement specific to the individual choreographer.

**320 DANCE NOTATION** 2 credits  
Beginning study of Labanotation method of recording movement, and Laban's theories of effort, space, and shape.

**321 RHYTHMIC ANALYSIS FOR DANCE** 2 credits  
By permission only. Not open to new freshmen. Lecture and application of basic rhythmic structures used in dance and dance instruction.

**322 BALLET VII: PRINCIPLES OF ADVANCED TECHNIQUE** 5 credits  
(May be repeated for a total of 30 credits) Prerequisite: permission. Continuation of 222. Emphasis on technique, style, line. Concurrent enrollment in pointe class recommended.

**328 MODERN VII: ADVANCED MODERN DANCE A** 3 credits  
(May be repeated for a total of six credits) Prerequisite: permission from instructor. Refinement and stylization of modern techniques for performance for modern dance.

**329 MODERN VIII: ADVANCED MODERN DANCE B** 3 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Application of advanced modern dance technique and styles.

**334 PAS DE DEUX I** 2 credits  
(May be repeated for a total of eight credits) Prerequisites: permission; concurrent enrollment in a pointe class recommended. Provides student with the beginning understanding and practice of pas de deux.

**341 POINTE III** 2 credits  
(May be repeated for a total of 16 credits) Prerequisite: permission. Continuation of 241. Advancement, development and application of principles of classical ballet technique through work on small variations, codas, enchainements and tour de force exercises.

**342 MEN'S CLASS** 2 credits  
(May be repeated for a total of eight credits.) Prerequisites: 122, permission. A classical ballet class focusing on tour de force and virtuoso movements specific to the male dancer.

**347 ADVANCED TAP STYLES** 2 credits  
Prerequisite: 7920:246 or permission. Advanced tap combinations, styles, routines.

**351 JAZZ DANCE STYLES** 2 credits  
Prerequisite: 7900:130 or placement audition. Intermediate jazz dance technique and the jazz eras.

**361 LEARNING THEORY FOR DANCE** 2 credits  
Prerequisites: 7900:115; 7900:224; or permission of instructor. Theories of learning and their use in teaching dance.

**362 INSTRUCTIONAL STRATEGIES FOR DANCE** 2 credits  
Prerequisite: 361. Practical work and development of teaching skills in dance for public and private settings.

**403 SPECIAL TOPICS IN DANCE** 1-4 credits  
(May be repeated. No more than 10 credits may be applied toward the B.F.A. or B.A.) Prerequisite: Permission. Traditional and nontraditional topics in dance.

**416 CHOREOGRAPHY III** 2 credits  
Prerequisite: 317, permission. Continuation of 317. Emphasis on form and choreographic analysis.

**417 CHOREOGRAPHY IV** 2 credits  
Prerequisite: 416 and permission. Continuation of 416. Expanding into group choreography and longer works.

**422 BALLET VIII: ADVANCED TECHNIQUE AND PERFORMANCE STYLES** 5 credits  
(May be repeated for a total of 40 credits) Prerequisite: Permission. Continuation of 322. Advanced level of technique. Concurrent enrollment in pointe class recommended.

**430 HISTORY OF MUSICAL THEATRE IN DANCE** 2 credits  
Prerequisite: 7900:115. Focus on dance styles and choreographers in Musical Theatre from a historical perspective.

**431 DANCE HISTORY: PREHISTORY TO 1661** 2 credits  
Prerequisite: 115 or permission. Study of important developments from prehistory through the Renaissance to the founding of the French Academy of Dance.

**432 DANCE HISTORY: 1661 THROUGH DIAGHILEV ERA** 2 credits  
Prerequisite: 115 or permission. Development of dance beginning with the establishment of the French Academy through the Romantic and Diaghilev Eras and their influence on current dance.

\*\* Any 7910 course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

- 433 DANCE HISTORY: 20th CENTURY** 2 credits  
Prerequisite: 115 or permission. Development of modern dance as an art form and the further evolution of ballet and concert dance.
- 434 PAS DE DEUX II** 2 credits  
(May be repeated for a total of six credits) Prerequisites: 334, permission; concurrent enrollment in a pointe class. Provides the student with advanced understanding and practice of pas de deux.
- 451 ADVANCED JAZZ DANCE STYLES** 2 credits  
Prerequisite: 351 or placement audition. Advanced jazz dance technique and styles for the professional dancer.
- 461 SEMINAR AND FIELD EXPERIENCE IN DANCE EDUCATION** 2 credits  
Prerequisite: 362. Supervised observation and teaching experience in dance education in the field. Concurrent enrollment in 7910:108 Choreographers' Workshop.
- 462 PROFESSIONAL ISSUES IN DANCE EDUCATION** 2 credits  
Prerequisite: 461. An examination of current issues and goals in dance education. Concurrent enrollment in 7910:108 Choreographers' Workshop.
- 490/590 WORKSHOP IN DANCE** 1-3 credits  
(May be repeated for a total of eight credits) Prerequisite: Advanced standing or permission. Group study/projects investigating a particular field of dance not covered by other courses.
- 497 INDEPENDENT STUDY IN DANCE** 1-3 credits  
(May be repeated for a total of four credits) Prerequisite: Permission and prearrangement with instructor. Individual creative project, research or readings in dance with faculty advisor.
- 498 SENIOR HONORS PROJECT IN DANCE** 1-3 credits  
(May be repeated for a total of six credits.) Prerequisites: Senior standing in Honors Program and approval of department preceptor. Creative project or research supervised by dance preceptor.

# College of Nursing

## COOPERATIVE EDUCATION

### 8000:

- 301 COOPERATIVE EDUCATION** *0 credits*  
(May be repeated). For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

## NURSING

### 8200:

- 100 INTRODUCTION TO NURSING** *1 credit*  
Introduces students to influences of past, present, and future political, legal, social, and cultural processes on the nursing profession and the roles of nurses.
- 101 INTRODUCTION TO BACCALAUREATE NURSING** *1 credit*  
Prerequisite: Licensed Practical Nurse. Introduces L.P.N./B.S.N. students to the purposes of baccalaureate nursing education. Explores philosophy, nursing theories, research, emerging roles, decision making, and the health care system.
- 205 COLLEGE OF NURSING ORIENTATION** *1 credit*  
Prerequisite: Admission to the College. Presentation of test-taking, time/stress management, college policies, financial aid, learning resources, preparing papers, programs of study, study/support groups and academic advisement.
- 210 BASIC CONCEPTS OF NURSING** *4 credits*  
Prerequisite: Admission to the College. Clinical course on the basic theories and concepts that novice nursing students need in order to care for healthy clients across the life span.
- 215 PROFESSIONAL ROLE DEVELOPMENT** *2 credits*  
Prerequisite: Admission to the College. Fosters the development of the professional role of the nurse in novice students as they begin nursing practice.
- 220 FOUNDATIONS OF NURSING PRACTICE** *5 credits*  
Prerequisite: Admission to the College. Clinical course which assists students to perform psychosocial and psychomotor skills with long-term care clients.
- 225 HEALTH ASSESSMENT** *3 credits*  
Prerequisite: Admission to the College. The skills of taking health histories and performance of basic physical assessment. Supervised practice in the Learning Resource Center.
- 315 PATHOPHYSIOLOGY FOR NURSES** *3 credits*  
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Develop understanding of basic concepts related to pathophysiological mechanism of health, illness as applied to nursing. Emphasis on application to nursing using the nursing process.
- 325 CULTURAL DIMENSIONS OF NURSING** *2 credits*  
Prerequisites: Satisfactory completion of all required Sophomore level nursing courses. Nursing care of clients of diverse ethnicities is emphasized. Special attention is given to selected ethnic groups' communication patterns, spirituality, health beliefs and practices.
- 330 NURSING PHARMACOLOGY** *3 credits*  
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Emphasis on fundamental concepts of pharmacology as applied to major drug classes, actions, and effects. Application of nursing process to drug therapy across life span.
- 336 CONCEPTS OF PROFESSIONAL NURSING** *4 credits*  
Prerequisite: Admission to the RN/BSN or LPN/BSN Sequences. Introduces the LPN and RN to baccalaureate nursing. Focuses on the relationship of concepts and theories to the role of the professional nurse. Offered Summer only.
- 350 NURSING OF THE CHILDBEARING FAMILY** *5 credits*  
Prerequisite: Satisfactory completion of Sophomore level nursing courses. A theoretical and clinical basis for care of the childbearing family in varying degrees of health and in a variety of settings.
- 350 NURSING CARE OF ADULTS** *5 credits*  
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of adults with nutrition, elimination, metabolic, sexual, reproductive, and immunological concerns. Includes theory and practice at the advanced beginner level.
- 370 NURSING CARE OF OLDER ADULTS** *5 credits*  
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of older adults with mobility, perception, circulation, and oxygenation concerns. Includes theory and practice at the advanced beginner level.
- 380 MENTAL HEALTH NURSING** *5 credits*  
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Assists students in developing knowledge and skills for providing care to individuals with mental health needs in a variety of settings.
- 405 NURSING CARE OF HEALTHY INDIVIDUALS** *5 credits*  
Prerequisite: 336. Clinical course focusing on health care concepts across the life span with emphasis on health promotion.
- 409 INTERNATIONAL NURSING** *3 credits*  
Prerequisite: Junior standing or Registered Nurse. Summer Elective course. A comparison of nursing in the Norwegian and American health care systems including educational, ethical, legal, political, demographic, and geographic influences on health care.
- 410 NURSING OF FAMILIES WITH CHILDREN** *5 credits*  
Prerequisite: Satisfactory completion of Junior level nursing courses. Theoretical and clinical nursing course focused on the child within a family context. Health problems of both acute and chronic nature are explored.
- 415 NURSING OF INDIVIDUALS WITH COMPLEX HEALTH PROBLEMS** *5 credits*  
Prerequisites: 405, 440. Introduces the RN/BSN student to patients and families with multiple health care needs. Focuses on critical and complex patient care situations.
- 430 NURSING IN COMPLEX AND CRITICAL SITUATIONS** *3 credits*  
Prerequisite: Satisfactory completion of all Junior level nursing courses. Introduces advanced beginners to the complexity of nursing care in acute complex and critical situations of patients with multi-system failures.
- 435 NURSING RESEARCH** *3 credits*  
Prerequisite: Satisfactory completion of all Junior level nursing courses. Exploration of the effects of nursing research on the profession, become a knowledgeable consumer of research.
- 440 NURSING OF COMMUNITIES** *5 credits*  
Prerequisite: Satisfactory completion of all Junior level nursing courses. A synthesis of nursing skills applied among various community populations. Health and illness care strategies within diverse health care systems to promote the health of groups.
- 445 NURSING LEADERSHIP FOR CLIENT CARE** *2 credits*  
Prerequisite: Satisfactory completion of all Junior level nursing courses. Leadership and management concepts within the dynamic health care setting. Classical and contemporary approaches are explored with application in senior nursing courses.
- 446 PROFESSIONAL NURSING LEADERSHIP** *5 credits*  
Prerequisite: 405, 440. Provides the RN/BSN student with the theoretical foundation for leadership and management in a dynamic health care setting. Contemporary and classical approaches will be explored.
- 450 SENIOR NURSING PRACTICUM** *3 credits*  
Prerequisite: Satisfactory completion of all Junior level nursing courses. In-depth clinical nursing experiences with professional nurse preceptors in student-selected health care settings. An individualized learning contract will be developed.
- 455 PROFESSIONAL ISSUES** *2 credits*  
Prerequisite: Satisfactory completion of all Junior level courses. Exploration of facts, values, beliefs and ethics related to professional issues affecting the practice of nursing and role transition from student to professional.
- 460 ISSUES AND ROLES OF THE PROFESSION OF NURSING** *3 credits*  
Prerequisite: admission to RN/MSN sequence. The focus of the course is to relate role theory to personal and professional life. Issues affecting the nursing profession and delivery of nursing care are addressed.
- 465 CONCEPTS AND THEORIES OF PROFESSIONAL NURSING** *3 credits*  
Prerequisite: Admission to the RN/MSN Sequence. Selected concepts and theories relevant to professional nursing are studied and related to nursing practice. Critical thinking strategies are utilized to examine nursing theories and concepts.
- 470 COMMUNITY HEALTH NURSING** *4 credits*  
Prerequisite: 460, 465. Explores selected concepts and issues relevant to community health nursing. The effects of legal, ethical, economic, and political issues on community health nursing are discussed.
- 480 SENIOR HONORS PROJECT** *1-3 credits*  
Prerequisites: senior standing in Honors Program and nursing major. A creative project, independent study or research relevant to nursing which is supervised by a faculty preceptor and/or sponsor.
- 465 LEADERSHIP AND MANAGEMENT ROLES IN PROFESSIONAL NURSING** *5 credits*  
Prerequisites: 460, 465, 470. Focuses on advanced role transition as it relates to the resocialization process of professional nurses. Relates the resocialization of the nurse to leadership and management roles.
- 489/589 SPECIAL TOPICS: NURSING** *1-4 credits*  
(May be repeated as new topics are presented) Group studies of special topics in nursing. May not be used to meet requirements for the major in nursing. May be used for elective credit.
- 493/593 WORKSHOPS** *1-4 credits*  
(May be repeated as new topics are presented) Selected topics in nursing. May be used to meet undergraduate or graduate major requirements at the discretion of the college.
- 497 INDEPENDENT STUDY** *1-3 credits*  
Prerequisite: permission of Associate Dean, Undergraduate Programs and good academic standing. Provides opportunity to develop greater depth in an area of nursing through methodology specific to discipline of nursing.

# College of Polymer Science and Polymer Engineering

## INTERDISCIPLINARY COURSES: POLYMER SCIENCE AND POLYMER ENGINEERING 9821:

- 281 POLYMER SCIENCE FOR ENGINEERS** *2 Credits*  
Prerequisite: Basic chemistry courses 3150:132 and 133. Chemical bonds and structure of organic molecules, polymer chain structure, amorphous and crystalline morphology and structural characterization, polymerization and copolymerization, experimental demonstrations, typical solid-state and flow properties.
- 381 POLYMER MORPHOLOGY FOR ENGINEERS** *3 Credits*  
Prerequisites: 9841:281, 3150:133, 3650:292. Fundamental understanding of solid structure, crystallography and morphology, processed polymers, co-polymers and their blends.

## POLYMER ENGINEERING 9841:

- 321 POLYMER FLUID MECHANICS** *3 Credits*  
Prerequisite: 4600:310 or equivalent. Rheological properties and flow characteristics of polymer fluid systems; non-Newtonian viscosity, viscoelasticity.
- 422 POLYMER PROCESSING** *3 Credits*  
Prerequisites: 321 and 4600:315 or equivalent. Polymer processing technology. Basic studies of flow in extrusion, molding, and other processing methods.
- 425 INTRODUCTION TO BLENDING AND COMPOUNDING OF POLYMERS** *3 credits*  
Prerequisites: 4200:321; 4300:341; 4600:310 or permission. Nature of polymer blends and compounds and their applications. Preparation and technology using batch and continuous mixers, mixing mechanisms.
- 427 MOLD DESIGN** *3 credits*  
Prerequisites: 4200:321; 4300:341; 4600:310 or permission. Molding methods to manufacture polymeric products. Machinery, materials, molds, equipment, computer-aided design.
- 450 ENGINEERING PROPERTIES OF POLYMERS** *3 credits*  
Prerequisites: 4600:315, 336 and 380 or permission. Introductory course to engineering properties and processing of polymers. Analysis of mechanical tests of polymers in the glassy, rubbery, and fluid states. Product design. Concepts of rheology, rheometry and polymer processing.
- 451 POLYMER ENGINEERING LABORATORY** *2 Credits*  
Prerequisite: 321. Corequisite: 422. Laboratory experiments on the rheological characterization or polymer melts, fabrication of engineering products, structural investigation of polymeric parts.
- 499 POLYMER ENGINEERING PROJECT** *1-3 credits*  
Prerequisite: permission. Individual research project pertinent to polymer engineering under faculty supervision.

## POLYMER SCIENCE 9871:

- 303 SPECIAL PROJECTS IN POLYMER SCIENCE** *1-2 credits*  
Prerequisite: 302. Research projects of a limited scope for student desiring experience with a professor working in a specific field. The course would be designed to give the student the processes involved in outlining projects, setting up equipment, collecting and recording research data in a scientific manner.
- 401 INTRODUCTION TO ELASTOMERS** *3 credits*  
Prerequisites: physical chemistry (or equivalent) or permission. An introduction to the science and technology of elastomeric materials. Lecture and laboratory.
- 402 INTRODUCTION TO PLASTICS** *3 credits*  
Prerequisite: 401. An introduction to the science and technology of plastic materials. Lecture and laboratory.
- 407 POLYMER SCIENCE** *4 credits*  
Prerequisite: 3150:314 or 3650:301 or permission. Principles of polymerization processes and relationships between molecular structures and physical behavior of polymers. Molecular weight distributions of macromolecules discussed and methods of determining molecular weights utilized.
- 411/511 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS I** *3 credits*  
Prerequisite: 301 or 302 or permission. Interdisciplinary course involving the principles of chemistry and physics are brought to bear on relationships between molecular structure and chemical composition of macromolecules and their physical properties.
- 412/512 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS II** *2 credits*  
Prerequisite: 411/511 or permission. Mechanical characterization of polymeric materials, the Boltzmann superposition principle and fracture. Experimental techniques involving stress-strain behavior, stress relaxation, creep, forced and free vibrations discussed.
- 413/513 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS III** *2 credits*  
Prerequisite: 412/512 or permission. Deformation of bounded rubber units, the correspondence principle, time-dependent failure, mechanical properties of polymeric foams and design considerations discussed.
- 414 SEMINAR IN POLYMER SCIENCE** *1-2 credits*  
New and unsolved problems of polymer science discussed from interdisciplinary view of material sciences. A student prepares one or more formal technical presentations related to chemical aspects of field.
- 415 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS LABORATORY** *2 credits*  
Prerequisite: 413 or permission. Laboratory experiments involving the topics covered in the prerequisite course.
- 416 EXTRUSION AND MOLDING** *3 credits*  
Prerequisite: 302 or permission. Introduction of extrusion and molding processes for plastics. Theory of extrusion and molding processes and their application to the types of materials used, variations in equipment and the processing characteristics involved. Lecture and laboratory.
- 417 ADHESIVES AND COATING** *2 credits*  
Prerequisite: 302 or permission. This course involves the fundamentals of adhesives and coatings technology. The chemical and physical properties of adhesives and coatings will be discussed and will be related to molecular structure. Specific materials, applications and testing procedures will be discussed and practical experience gained by experimentation in the laboratory.
- 418 COMPOSITES, CELLULAR STRUCTURES AND TIRE TECHNOLOGY** *4 credits*  
Prerequisite: 302 or permission. The importance and science of composite structures will be taught and applied to the technology of foam and tire manufacture. Laboratory experiments will be used to illustrate the principles involved.
- 490/590 WORKSHOP IN POLYMER SCIENCE** *1-3 credits*  
(May be repeated with permission) Group studies on selected topics involving polymers. May not be used to meet undergraduate or graduate major requirements in polymer science. May be used for elective credit only.
- 499 RESEARCH PROBLEMS IN POLYMER SCIENCE** *1-3 credits*  
Prerequisite: permission. Faculty-supervised undergraduate research problems in polymer science, culminating in a written report.



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**OLETHA THOMPSON**, *Assistant Vice President for Student Affairs*, M.Ed.

**J. GARY TRAVENY**, *Director of New Student Orientation*, M.A.

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**THOMAS J. VUKOVICH**, *Associate Vice President for Student Affairs*, Ph.D.

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**MAX S. WILLIS, JR.**, *Associate Dean for Research and Graduate Studies in the College of Engineering*, Ph.D.

**JOHN R. WRAY**, *Treasurer*, J.D.

**CHARLES M. YATES**, *Director of Sports Information*, M.A.

## Emeritus Faculty

### September 1995

**NORMAN P. AUBURN**, *President Emeritus of the University, Professor Emeritus of Political Science and Consultant* (1951) (Ret. as President 1971; Consultant 1971-) B.A., University of Cincinnati, 1927; LL.D. Parsons College, 1945; LL.D., University of Cincinnati, 1952; D.Sc. University of Tulsa, 1957; LL.D. University of Liberia (West Africa), 1959; Litt.D., Washburn University of Topeka, 1961; L.H.D., College of Wooster, 1963; LL.D., The University of Akron, 1971; D.C.L. Union College, 1979.

**D. J. GUZZETTA**, *President Emeritus; Professor Emeritus of Higher Education* (1954-March 1968) (August 1971) (Ret. as President September 1984) (Ret. August 1985) B.A., Ed.M., Ed.D., University of Buffalo, 1953; LL.D., The University of Akron, 1968; D.S.Sc., Marian College, 1971; LL.D., Kent State University, 1971; L.H.D., Walsh College; LL.D., Bellevue College, 1978.

**IRVING A. ACHORN**, *Professor Emeritus of Art* (1965) (Ret. December 1983) B.S., M.A., Kent State University, 1956.

**ALEXANDER L. ADAMS**, *Assistant Professor Emeritus of Physical Education* (1970) (Ret. December 1989) B.S.Ed., M.S.Ed., The University of Akron, 1970.

- HOBART W. ADAMS**, *Professor Emeritus of Accounting* (1969) (Ret. June 1993) B.S.Ed., Kent State University; M.B.A., D.B.A., Indiana University at Bloomington, 1967.
- J. THOMAS ADOLPH**, *Professor Emeritus of Physical Education* (1969) (Ret. June 1995) B.A., The University of Akron; M.Ed., Ohio University; Ph.D., The Ohio State University, 1969.
- DORIS S. ALDRICH**, *Associate Professor Emeritus of Home Economics* (1973) (Ret. December 1988) B.S., M.Ed., Kent State University, 1972.
- VIRGINIA L. ALLANSON**, *Associate Professor Emeritus of Bibliography* (1968) (Ret. June 1984) B.S., Purdue University; M.L.S., Kent State University, 1966.
- ABDUL AMER ALRUBAIY**, *Professor Emeritus of Education* (1972) (Ret. May 1994) B.S., M.A., E.D.S., Eastern Michigan University; Ph.D., Kent State University, 1972.
- BARBARA S. ANANDAM**, *Assistant Professor Emeritus for Nursing* (March 1973) (Ret. June 1993) B.S., M.S., Boston University; Ed.S., Kansas State Teachers College, 1971.
- WALTER E. ARMS**, *Associate Professor Emeritus of Education* (1968) (Ret. July 1989) B.S., Northwest Missouri State College; M.Ed., University of South Dakota; Ed.D., Indiana University at Bloomington, 1968.
- BARBARA N. ARMSTRONG**, *Professor Emeritus of Home Economics* (1972) (Ret. December 1989) B.S., M.S., West Virginia University; Ph.D., The Ohio State University, 1970.
- BRUCE R. ARMSTRONG**, *Professor Emeritus of Art* (1971) (Ret. May 1994) B.F.A., California Institute of the Arts; M.F.A., Washington State University, 1968.
- WILLIAM J. ARN**, *Professor Emeritus of Education* (1967) (Ret. December 1983) B.S.Ed., Ohio Northern University; M.S.Ed., Bowling Green State University; Ph.D., Kent State University, 1967.
- HELEN MAE ARNETT**, *Associate Professor Emeritus of Bibliography* (1953) (Ret. 1972) B.A., The University of Akron; B.S.L.S., Case Western Reserve University; M.A., San Jose State College (California); Ph.D., Case Western Reserve University, 1965.
- GLENN A. ATWOOD**, *Associate Dean Emeritus of the College of Engineering*, Professor Emeritus of Chemical Engineering (1965) (Ret. December 1989) B.S., M.S., Iowa State University; Ph.D., University of Washington, 1963; P.E. Ohio.
- MARY ELLEN ATWOOD**, *Professor Emeritus of Education* (1969) (Ret. May 1994) B.S., Iowa State University; M.S., Ph.D., The University of Akron, 1983.
- GERTRUDE BADGER**, *Associate Professor Emeritus of Education* (1965) (Ret. 1977) B.S.Ed., B.A., The Ohio State University; M.Ed., Kent State University, 1960.
- FRANK V. BALDO**, *Professor Emeritus of Marketing* (1969) (Ret. 1979) B.B.A., Fenn College; M.B.A., Case Western Reserve University; Ph.D., Pennsylvania State University, 1968.
- HOWARD R. BALDWIN**, *Associate Vice President for Administrative Services Emeritus* (July 1967) (Ret. December 1989) B.P.S.M., Mount Union College; M.Ed., Kent State University, 1960.
- GEORGE W. BALL**, *Executive Director Emeritus of University Relations and Development* (1957) (Ret. August 1987) B.A., Mount Union College, 1943.
- ARPAD FREDERIC BANDA**, *Professor Emeritus of Finance* (1968) (Ret. December 1988) B.S., City College of New York; M.B.A., Ph.D., New York University, 1964; C.F.A., C.F.P.
- JAMES P. BANKS**, *Director Emeritus of Development* (May 1974) (Ret. January 1987) B.S., Ohio University, 1950.
- H. KENNETH BARKER**, *Dean Emeritus of the College of Education; Professor Emeritus of Education* (1966) (Ret. December 1987) B.A., M.A., University of Louisville; Ph.D., University of Michigan, 1959.
- DAVID BARR**, *Associate Professor Emeritus of Education* (July 1974) (Ret. June 1993) B.S., M.A., Kent State University, 1966.
- CHARLES M. BARRESI**, *Professor Emeritus of Sociology* (1966) (Ret. December 1989) B.A., M.A., University of Buffalo; Ph.D., State University of New York at Buffalo, 1965.
- MARIAN L. BAUER**, *Associate Professor Emeritus of Nursing* (1969) (Ret. 1982) B.A., Maryville College; M.N., Western Reserve University, 1941; R.N.
- IRENE C. BEAR**, *Professor Emeritus of Home Economics* (1944) (Ret. 1968) B.S., Illinois Wesleyan University; M.A., Texas State College for Women, 1937.
- DONALD E. BECKER**, *Associate Professor Emeritus of Management* (1959) (Ret. 1988) B.A., M.A., Oberlin College, 1948.
- WILLIAM C. BECKER**, *Professor Emeritus, School of Law* (1985) (Ret. May 1994) A.B., Harvard University; J.D., University of Michigan, 1956.
- CLARE BEDLILION**, *Associate Professor Emeritus in the Community and Technical College* (1968) (Ret. 1975) B.A., Woman's College of Georgia; M.A., New York University; Ph.D., University of Michigan, 1974.
- EUGENE M. BENEDICT**, *Assistant Professor Emeritus in the Community and Technical College* (January 1969) (Ret. 1982) M.Div., Boston University School of Theology; B.A.Ed., M.A., The University of Akron, 1964.
- DONALD K. BERQUIST**, *Associate Professor Emeritus of Accounting* (1968) (Ret. December 1988) B.S. B.A., Youngstown State University; M.Acc., The Ohio State University, 1964; C.P.A., Ohio.
- ROBERT C. BERRY**, *Director of Placement Emeritus* (1946) (Ret. 1976) B.S.B.A., The University of Akron, 1942.
- CARL A. BERSANI**, *Professor Emeritus of Sociology* (1965) (Ret. July 1993) B.A., Eastern Michigan University; M.A., University of Michigan at Ann Arbor; Ph.D., Iowa State University, 1965.
- MICHAEL BEZBATCHENKO**, *Professor Emeritus of Mechanical Engineering* (June 1949) (Ret. 1979) B.M.E., The University of Akron; M.S., Case Western Reserve University, 1954; P.E., Ohio.
- VINCENT J. BIONDO**, *Assistant Professor Emeritus of Education* (1968) (Ret. 1976) B.A., M.A., M.A.Ed., The University of Akron, 1957.
- DONALD F. BIRDELL**, *Professor Emeritus of Education* (1977) (Ret. 1988) B.A., Luther College; M.A., University of Minnesota; Ph.D., University of Iowa, 1965.
- ROBERT R. BLACK**, *Associate Professor Emeritus of Economics* (1958) (Ret. 1983) B.A., Carleton College; M.B.A., University of Chicago; Ph.D., University of California at Berkeley, 1963.
- RALPH O. BLACKWOOD**, *Professor Emeritus of Education* (1967) (Ret. June 1993) B.A., Muskingum College; M.A., Ph.D., The Ohio State University, 1962.
- C. ROBERT BLANKENSHIP**, *Instructor Emeritus in Education* (1952) (1956) (Ret. 1982) B.S.B.A., The University of Akron; M.S.Ed., Indiana University, 1963.
- BORIS BLICK**, *Associate Professor Emeritus of History* (1964) (Ret. August 1989) B.A., Brooklyn College; M.A., Ph.D., University of Wisconsin at Madison, 1958.
- JOHN A. BLOUGH**, *Professor Emeritus of Education* (1979) (Ret. August 1986) B.A., College of Wooster; Ph.D., The Ohio State University, 1971.
- GERALD J. BLUMENFELD**, *Professor Emeritus of Education* (1970) (Ret. June 1994) B.A., Harris Teachers College; M.A., Ed.D., Washington University (St. Louis), 1966.
- DONALD L. BOWLES**, *Vice President for Administrative Services Emeritus* (February 1959) (Ret. December 1989) B.S.I.M., B.A.Ed., The University of Akron, 1959.
- ALLEN M. BOYER**, *Member of the General Faculty Emeritus* (November 1966) (Ret. 1982) B.A., The University of Akron, 1942.
- FRANK V. BRADSHAW**, *Professor Emeritus of Music* (1968) (Ret. December 1988) B.A., M.A., Bob Jones University, 1950.
- MARKO BRDAR**, *Associate Professor Emeritus of Chemical Engineering* (1967) (Ret. 1982) B.A., M.A., Case Western Reserve University, 1954.
- THOMAS O. BROWN**, *Director Emeritus of Counseling and Testing Center* (July 1964) (Ret. December 1993) B.S., M.Ed., Mississippi State University; Ph.D., Kent State University, 1968.
- ARTHUR E. BURFORD**, *Professor Emeritus of Geology* (1968) (Ret. December 1989) B.A., Cornell University; M.S., University of Tulsa; Ph.D., University of Michigan, 1960.
- DONALD R. BURROWBRIDGE**, *Professor Emeritus of Coordination* (July 1965) (Ret. 1986) B.S., University of Wisconsin; M.S., Virginia Polytechnic Institute, 1965.
- JUNE R. K. BURTON**, *Associate Professor Emeritus of History* (1971) (Ret. May 1994) A.B., M.A., Stetson University; Ph.D., University of Georgia, 1971.
- ALBERT C. BUXTON**, *Associate Professor Emeritus of Electronic Technology* (January 1975) (Ret. 1986) B.S.E.E., M.S.E.E., Tulane University, 1951.
- FELICITAS CALDERON**, *Assistant Director Emeritus of International Programs-Special Programs* (July 1980) (Ret. June 1994) B.A., The University of Akron, 1979.
- GERALD R. CAMP**, *Associate Professor Emeritus of Computer Programming Technology* (March 1969) (Ret. June 1993) B.A., Case Western Reserve University; M.S., J.D., The University of Akron, 1980.
- THOMAS A. CAMPBELL**, *Track Coach Emeritus* (August 1968) (Ret. June 1995) B.S.Ed., M.S.Ed., The University of Akron, 1970.
- MARY CAPOTOSTO**, *Assistant Professor Emeritus of Communicative Disorders* (1968) (Ret. 1983) B.A., The University of Akron; M.A., DePaul University, 1967.
- NATHAN F. CARDARELLI**, *Professor Emeritus of General Technology* (1968) (Ret. June 1992) B.S., B.A., M.S., M.A., M.S., The University of Akron, 1988.
- MARILYN JEAN CARRELL**, *Senior Associate Director Emeritus of the Career Center* (October 1972) (Ret. June 1993) B.S., M.S.Ed., The University of Akron, 1972.
- CAESAR A. CARRINO**, *Dean Emeritus of the Evening College and Summer Sessions; Professor Emeritus of Education* (1967) (Ret. June 1989) B.S.Ed., Baldwin-Wallace College; M.S.Ed., The University of Akron; Ph.D., Case Western Reserve University, 1965.
- ROBERT C. CARSON**, *Associate Professor Emeritus of Mathematical Sciences* (July 1963) (Ret. 1989) B.S., M.S., Purdue University; Ph.D., University of Wisconsin at Madison, 1953.
- TSE-YUNG CHANG**, *Professor Emeritus of Civil Engineering* (1970) (Ret. August 1993) B.S.C.E., National Taiwan University; M.S., Ph.D., University of California-Berkeley, 1966.
- CHUN FU CHEN**, *Professor Emeritus of Electrical Engineering* (February 1968) (Ret. June 1994) B.S., National Taiwan University; M.S., University of Tennessee at Knoxville; Ph.D., Vanderbilt University, 1968; P.E., Ohio.
- MARY ELIZABETH CHESROWN**, *Member of the General Faculty Emeritus* (June 1965) (Ret. January 1986) B.A., The University of Akron, 1949.
- YONG H. CHO**, *Professor Emeritus of Urban Studies* (1967) (Ret. August 1989) B.A., Seoul National University (Korea); M.P.A., Ph.D., Syracuse University, 1965.
- HUGH G. CHRISTMAN**, *Professor Emeritus of Education* (1970) (Ret. December 1989) B.S., Miami University; M.Ed., Ed.D., Pennsylvania State University, 1970.
- BARBARA L. CLARK**, *Assistant Professor Emeritus of Bibliography* (October 1957) (Ret. December 1986) B.A., The University of Akron; M.L.S., Kent State University, 1982.
- BLANCH E. CLEGG**, *Associate Professor Emeritus of Education* (1973) (Ret. June 1994) B.S.Ed., Wayne State University; M.Ed., C.A.G.S., University of Massachusetts at Amherst; Ph.D., University of Washington, 1971.
- LLOYD L. CLOSE**, *Associate Professor Emeritus of Transportation* (1979) (Ret. May 1994) B.S., Kent State University; M.S.Tech.Ed., The University of Akron, 1983.
- JOHN R. COCHRAN**, *Professor Emeritus of Education* (1969) (Ret. August 1989) B.S., M.A., Ph.D., The Ohio State University, 1968.
- KENNETH COCHRANE**, *Professor Emeritus of Physical Education* (1948) (Ret. 1973) B.E., The University of Akron; M.Ed., University of Pittsburgh, 1941.
- ROBERT E. COLLINS**, *Associate Professor Emeritus of Office Administration* (1964) (Ret. December 1988) B.A., Glenville State Teachers College (W.Va.); M.A., West Virginia University, 1952.
- W. HENRY CONE**, *Associate Professor Emeritus of Education* (1971) (Ret. December 1989) B.A.E., B.S.A., M.Ed., University of Florida; D.Ed., Harvard Graduate School of Education, 1962.
- ROBERT G. CORBETT**, *Professor Emeritus of Geology* (1969) (Ret. August 1989) B.S., M.S., Ph.D., University of Michigan at Ann Arbor, 1964.
- WALDEN B. CRABTREE, SR.**, *Professor Emeritus of Education* (1968) (Ret. May 1994) B.A., St. Meinrad College (Indiana); M.S.Ed., Ph.D., Indiana University at Bloomington, 1968.
- CLARE A. CRITZER**, *Emeritus Assistant to the Assistant Dean of Student Affairs*, College of Nursing (June 1983) (Ret. June 1995) B.S.N., M.S.N., Catholic University of America, 1960.
- GEORGE D. DAVIS**, *Professor Emeritus of Communicative Disorders* (1974) (Ret. December 1988) B.S.Ed., Kent State University; M.A., Ph.D., The Ohio State University, 1968.
- BERNARD A. DEITZER**, *Professor Emeritus of Management, Director of Seminars* (January 1967) (Ret. 1992) B.A., Allegheny College; M.L.L., University of Pittsburgh; Ph.D., The Ohio State University, 1967.
- JAMES L. DENNISON**, *Assistant Professor Emeritus of Physical Education* (July 1965) (Ret. July 1993) B.A., College of Wooster; M.A.Ed., The University of Akron, 1968.
- HAMILTON DESAUSSURE**, *Professor Emeritus of Law* (1970) (Ret. 1992) B.A., Yale University; L.L.B., Harvard University; L.L.M., McGill Institute of International Air Law, 1953.
- IRWIN DEUTSCHER**, *Professor Emeritus of Sociology* (1975) (Ret. December 1983) B.A., M.S., M.A., Ph.D., University of Missouri, 1959.

- LILLIAN J. DeYOUNG**, *Dean Emeritus of the College of Nursing; Professor Emeritus of Nursing* (July 1975) (Ret. December 1988) B.S., M.S., Ph.D., University of Utah, 1975.
- CONSTANTIN DIMITRIU**, *Assistant Professor Emeritus of Classics* (May 1970) (Ret. 1986) Baccalaureate, University of Cluj, Romania; M.A., National University of Bucuresti; M.S.L.S., Case Western Reserve University, 1969.
- HELMAR H. A. DOLLWET**, *Professor Emeritus of Biology* (January 1970) (Ret. June 1993) B.S., University of Michigan at Ann Arbor; M.S., Technische Hochschule, Munich; M.S., Ph.D., University of California at Riverside, 1969.
- JAMES E. DOVERSPIKE**, *Associate Professor Emeritus of Psychology* (1984) (Ret. June 1994) B.S., John Carroll University; M.S., University of Wisconsin at Oshkosh; Ph.D., The University of Akron, 1983.
- MILAN F. DUBRAVIC**, *Professor Emeritus of Chemical Technology* (January 1968) (Ret. December 1986) Ingenieur of Chemistry, University of Zagreb; Ph.D., University of Massachusetts, 1988.
- R. WAYNE DUFF**, *Vice President Emeritus of Business and Finance* (May 1963) (Ret. June 1989) B.A., Oberlin College; LL.B., Cleveland-Marshall Law School, 1951.
- MARY F. DUGAN**, *Assistant Professor Emeritus of Nursing* (1986) (Ret. June 1993) B.S., M.S., City University of New York, Hunter College, 1962; R.N.
- PAUL H. DUNHAM**, *Associate Professor Emeritus of Manufacturing Technology* (1972) (Ret. 1986) B.A., Case Western Reserve University; M.B.A., Ph.D., Kent State University, 1980.
- JAMES W. DUNLAP**, *Dean Emeritus of the College of Business Administration; Professor Emeritus of Finance* (1963) (Ret. December 1989) B.B.A., Memphis State University; M.B.A., Ph.D., University of Arkansas, 1963.
- JOSEPH A. ADMINISTER**, *Professor Emeritus of Electrical Engineering* (May 1957) (Ret. December 1983) B.E.E., M.S.E., J.D., The University of Akron, 1974; P.E., Ohio.
- BERNARD L. ESPORTE**, *Professor Emeritus of Education* (1970) (Ret. June 1995) B.S.Ed., M.Ed. Ph.D., Miami University, 1971.
- CHARLOTTE L. ESSNER**, *Associate Professor Emeritus of Communicative Disorders* (1965) (Ret. 1982) B.A., Hunter College; M.A., The University of Akron, 1964.
- STEPHEN A. FARIA, JR.**, *Instructor Emeritus of Modern Languages* (1967) (Ret. May 1994) B.A., Harvard University; M.A., Cornell University, 1965.
- MICHAEL F. FARONA**, *Professor Emeritus of Chemistry* (1964) (Ret. July 1990) B.S., Case Western Reserve University; M.S., Ph.D., The Ohio State University, 1964.
- LEONA W. FARRIS**, *Director Emeritus of the Community Involvement Component of Home Economics* (1989) (Ret. 1988) B.S., The Ohio State University; M.A., Kent State University, 1970.
- RICHARD M. FAWCETT**, *Associate Professor Emeritus in the Community and Technical College* (1969) (Ret. 1989) B.A., M.Ed., Kent State University, 1959.
- JAMES V. FEE**, *Professor Emeritus of Communication* (1967) (Ret. December 1989) B.S.Ed., M.S.Ed., Southern Illinois University at Carbondale; Ph.D., The Ohio State University, 1964.
- ROBERT E. FERGUSON**, *Professor Emeritus of Education* (1965) (Ret. December 1983) B.S., M.A., Kent State University; Ed.D., Case Western Reserve University, 1965.
- ALICE M. FLAKSMAN**, *Associate Professor Emeritus of Music* (1965) (Ret. 1978) B.A., Hunter College; M.A., Columbia University, Teachers College; Ph.D., The University of Akron, 1972.
- WILLIAM S. FLEMING**, *Professor Emeritus in the Community and Technical College* (1968) (Ret. May 1991) B.Sc.Ed., Rutgers University; M.A., University of Pennsylvania; Ph.D., Kent State University, 1970.
- VAUGHN W. FLOUTZ**, *Professor Emeritus of Chemistry* (1941) (Ret. 1970) B.A., Olivet College; M.A., Ph.D., University of Colorado, 1932.
- DOROTHY A. FRANCY**, *Certification Coordinator Emeritus* (1979) (Ret. 1988) B.S., M.S., The University of Akron, 1973.
- PAULINE FRANKS**, *Professor Emeritus of Bibliography* (April 1950) (Ret. December 1983) B.S.Ed., Kent State University; B.S.L.S., Case Western Reserve University, 1940.
- ROBERT N. GANDEE**, *Professor Emeritus of Physical Education* (1973) (Ret. 1989) B.S., M.S., The University of Akron; Ph.D., The Ohio State University, 1972.
- PAUL D. GARN**, *Professor Emeritus of Chemistry* (1963) (Ret. 1989) B.S., M.S., Ph.D., The Ohio State University, 1952.
- ALAN N. GENT**, *Harold A. Morton Professor Emeritus of Polymer Engineering and Physics* (April 1961) (Ret. June 1994) B.S.C. (General), B.S.C. (Special Physics), Ph.D., University of London, 1955.
- DON R. GERLACH**, *Professor Emeritus of History* (1962) (Ret. May 1994) B.S.Ed., M.A., Ph.D., University of Nebraska at Lincoln, 1961.
- THOMAS E. GETZINGER**, *Assistant to the Vice President for Business and Finance Emeritus* (1969) (Ret. December 1989) B.S.B.A., The University of Akron; M.B.A., Kent State University, 1966; C.P.A.
- PETER J. GINGO**, *Associate Professor Emeritus of Mathematical Sciences; Associate Professor Emeritus of Biomedical Engineering* (1969) (Ret. June 1994) B.S., The University of Akron; M.A., Ph.D., University of California at Los Angeles, 1966.
- WILLIAM M. GLAZIER**, *Professor Emeritus of Surveying and Construction Technology; Professor Emeritus of Construction Technology* (1958) (1967) (Ret. December 1989) B.S.C.E., Michigan Technical University; M.S.C.E., University of Michigan; Ph.D., West Virginia University, 1978; P.E., Ohio, Michigan and District of Columbia.
- HOWARD L. GREENE**, *Professor Emeritus of Chemical Engineering* (1965) (Ret. December 1989) B.Ch.E., M.Ch.E., Ph.D., Cornell University, 1966.
- CLAIBOURNE E. GRIFFIN**, *Dean Emeritus of the Buchtel College of Arts and Sciences; Professor Emeritus of Chemistry* (July 1974) (Ret. June 1994) B.A., Princeton University; M.S., Ph.D., University of Virginia, 1955.
- EDNA P. GRIST**, *Associate Professor Emeritus of Nursing* (January 1968) (Ret. February 1989) B.S.N.Ed., M.S.Ed., The University of Akron, 1967; R.N.
- FRANK J. GRUCCIO, JR.**, *Professor Emeritus of the Community and Technical College* (1966) (Ret. May 1994) B.A., M.A., The University of Akron, 1967.
- ROBERT S. GRUMBACH**, *Associate Professor Emeritus of Electrical Engineering* (1961) (Ret. 1987) B.S.E.E., Case Western Reserve University; M.S.E.E., West Virginia University, 1951.
- BARBARA A. GSELLMAN**, *Instructor Emeritus in Mechanical Technology* (1967) (Ret. 1988) B.M.E., The University of Akron, 1950.
- GORDON A. HAGERMAN**, *Member of the General Faculty Emeritus* (July 1941) (Ret. 1981) B.A., The University of Akron, 1941.
- ROBERT D. HAHN**, *Director Emeritus of Student Financial Aid and Employment* (July 1969) (Ret. June 1994) B.S.Ed., M.Ed., Kent State University, 1969.
- DOROTHY HAMLIN**, *Professor Emeritus of Bibliography* (February 1937) (Ret. 1972) B.A., The University of Akron; B.S.L.S., Case Western Reserve University, 1942.
- RICHARD L. HANSFORD**, *Vice President and Dean Emeritus of Student Services* (August 1949) (Ret. December 1985) B.A.Ed., M.A.Ed., The University of Akron, 1954.
- CHARLOTTE M. HANTEN**, *Associate Professor Emeritus of Art* (1969) (Ret. 1982) B.A., Earham College; M.Ed. Pennsylvania State University, 1954.
- EDWARD W. HANTEN**, *Professor Emeritus of Urban Studies; Professor Emeritus of Geography* (1963) (Ret. 1982) B.A., Earham College; M.A., Ph.D., University of Pittsburgh, 1962.
- PHYLLIS M. HARDENSTEIN**, *Associate Professor Emeritus of Theatre Arts* (1947) (1956) (Ret. 1980) B.A., The University of Akron; M.A., University of Wisconsin, 1951.
- MARY GRACE HARRINGTON**, *Associate Professor Emeritus of Bibliography* (1960) (Ret. 1976) B.S., The University of Akron; B.A.L.S., University of Michigan, 1939.
- ALAN HART**, *Professor Emeritus of Philosophy* (1970) (Ret. May 1994) B.A., M.A., Syracuse University; Ph.D., University of Pennsylvania, 1965.
- DAVID N. HAWK**, *Associate Professor Emeritus of Finance* (1980) (Ret. December 1989) B.S., The Ohio State University; M.B.A., D.B.A., Kent State University, 1971.
- JOHN G. HEDRICK**, *Assistant Professor Emeritus of Associate Studies* (July 1967) (Ret. February 1989) B.S.Ed., Kent State University; M.A., University of Notre Dame, 1958.
- JACQUELINE S. HEGGAR**, *Assistant Professor Emeritus of Classics* (1967) (Ret. 1992) B.A., M.A., The University of Akron, 1967.
- WILLIAM S. HENDON**, *Professor Emeritus of Urban Studies; Professor Emeritus of Economics* (1968) (Ret. December 1988) B.A., M.A., Ph.D., University of Oklahoma at Norman, 1964.
- RICHARD L. HENRY**, *Professor Emeritus of Mechanical Technology* (1961) (Ret. December 1989) B.M.E., The Ohio State University; M.S.E., The University of Akron, 1965.
- ALBERTA R. HENSLEY**, *Director Emeritus of Special Projects* (January 1974) (Ret. December 1989) B.S.B.A., Indiana Central College, 1969.
- THOMAS P. HERBERT**, *Professor Emeritus of Electronic Technology* (1968) (Ret. June 1993) B.S.E.E., The University of Dayton; M.Ed., Pennsylvania State University, 1968.
- HARRIET K. HERSKOWITZ**, *Professor Emeritus of Home Economics and Family Ecology; Professor Emeritus of Educational Technology* (1973) (Ret. May 1994) B.S.Ed., Adelphi University; M.A., University of Connecticut, 1972.
- JACK E. HIBBS**, *Associate Professor Emeritus of Bibliography; Head of Collection Management Department* (October 1974) (Ret. June 1994) B.A., M.A.L.S., University of Toledo, 1969.
- LOUIS A. HILL, JR.**, *Dean Emeritus of the College of Engineering; Professor Emeritus of Civil Engineering* (July 1981) (Ret. August 1988) B.A., Oklahoma A&M; B.S.C.E., M.S.C.E., Oklahoma State University; Ph.D., Case Institute of Technology, 1965.
- ELIZABETH J. HITTLE**, *Professor Emeritus of Speech* (1950) (Ret. December, 1978) B.S.Ed., The University of Akron; M.A., Kent State University; Ed.D., Case Western Reserve University, 1963.
- KENNETH C. HOEDT**, *Professor Emeritus of Education* (1962) (Ret. 1986) B.S., State University of New York (Buffalo); M.S., Ph.D., University of Wisconsin, 1960.
- WILLIAM W. HOKMAN**, *Associate Professor Emeritus of Mathematical Sciences* (1967) (Ret. December 1989) B.S.Ed., M.A., M.S., West Virginia University, 1958.
- LORENA M. HOLSHOY**, *Associate Professor Emeritus of Art* (1969) (Ret. 1989) B.F.A., M.A., The Ohio State University, 1965.
- KATHRYN M. HOMEIER**, *Professor Emeritus of Nursing* (February 1967) (Ret. August 1986) B.S.N.E., St. Louis University; M.S.Ed., The University of Akron, 1963; R.N.
- MARTHA HOSFELT**, *Instructor Emeritus in English* (1961) (Ret. 1977) B.A., The University of Akron, 1959.
- RICHARD B. HOSKIN**, *Associate Professor Emeritus in the Community and Technical College* (1967) (Ret. 1981) B.A., Hiram College; M.E., Kent State University, 1955.
- JANICE D. HOUSER**, *Instructor Emeritus in Modern Languages* (1965) (Ret. July 1995) B.A., Butler University; M.A., Indiana University at Bloomington, 1964.
- JOHN J. HOUSER**, *Professor Emeritus of Chemistry* (1965) (Ret. July 1995) B.S., Villanova University; Ph.D., Pennsylvania State University, 1964.
- ELMORE J. HOUSTON**, *Member of the General Faculty Emeritus* (1972) (Ret. June 1994) B.A., Purdue University; M.A., The University of Akron, 1968.
- JACK D. HUGGINS**, *Associate Professor Emeritus of Business Management Technology* (1971) (Ret. May 1994) B.A., Saint Francis College; M.B.A., University of Colorado, 1970.
- JULIA A. HULL**, *Assistant Professor Emeritus of English* (1948) (Ret. December 1990) B.A., The University of Akron; M.A., Case Western Reserve University, 1950.
- FARLEY K. HUTCHINS**, *Professor Emeritus of Music* (1957) (Ret. May 1983) M.B., Lawrence University; S.M.M., S.M.D., Union Theological Seminary, 1951.
- ANNA MARIE HUTH**, *Member of the General Faculty Emeritus* (1979) (Ret. December 1989) B.S.N., The Ohio State University; M.S.N., University of Pittsburgh, 1965.
- SYS S. INMAN**, *Instructor Emeritus in Modern Languages* (1968) (Ret. May 1994) B.A., Baldwin-Wallace College; M.A., The University of Akron, 1968.
- DALE L. JACKSON**, *Professor Emeritus of Biology* (1961) (Ret. June 1993) B.S., Ph.D., University of Durham (England), 1959.
- DONALD M. JACKSON**, *Professor Emeritus of Marketing* (1969) (Ret. May 1989) B.A., M.B.A., Cornell University; D.B.A., Kent State University, 1976.
- JIM L. JACKSON**, *Associate Professor Emeritus of Geology* (1967) (Ret. December 1993) B.S.Ed., Kent State University; M.S., Case Western Reserve University; Ph.D., The Ohio State University, 1970.
- ALFRED H. JOHNSON**, *Associate Professor Emeritus of Education* (1956) (Ret. 1969) B.S., College of Wooster; M.S., Ph.D., University of Wisconsin, 1956.
- MARY JEAN JOHNSTON**, *Professor Emeritus of Office Administration* (1965) (Ret. 1989) B.S., Carnegie Institute of Technology; M.Ed., Ph.D., University of Pittsburgh, 1974.
- MIRIAM A. JOLIAT**, *Assistant Professor Emeritus of Bibliography* (April 1970) (Ret. December 1989) B.S.E., St. John College; M.S.L.S., Case Western Reserve University, 1969.
- DAVID L. JONES**, *Associate Professor Emeritus of English* (February 1961) (Ret. 1987) B.A., M.A., Ph.D., Harvard University, 1958.
- ROBERT H. JONES**, *Professor Emeritus of History* (1971) (Ret. December 1989) B.A., M.A., Ph.D., University of Illinois at Urbana, 1957.

- SEBASTIAN V. KANAOKANATT**, *Professor Emeritus of General Technology* (June 1965) (Ret. May 1994) B.S., Madras University (India); M.S., Ph.D., The University of Akron, 1969.
- ARTHUR KARLIN**, *Professor Emeritus of Accounting* (1971) (Ret. June 1994) B.S., New York University; M.S., Ph.D., University of Illinois at Urbana; J.D., The University of Akron; LL.M., New York University, 1977.
- CHAMAN N. KASHKARI**, *Associate Professor Emeritus of Electrical Engineering* (1969) (Ret. May 1994) B.A., Jammu Kashmir University; B.E., Rajasthan University; M.S.E., University of Detroit; Ph.D., University of Michigan at Ann Arbor, 1969.
- JOLTA E. KAVAJUNAS**, *Associate Professor Emeritus of Modern Languages* (1970) (Ret. May 1994) B.A., M.A., Ph.D., Case Western Reserve University, 1972.
- DON A. KEISTER**, *Distinguished Professor Emeritus of English* (1931) (Ret. 1971) B.A., M.A., The University of Akron; Ph.D., Case Western Reserve University, 1947.
- ORVILLE R. KEISTER, JR.**, *Distinguished Professor Emeritus of Accounting* (1966) (Ret. June 1995) B.S.B.A., M.B.A., The Ohio State University; Ph.D., University of Illinois, 1964.
- ROGER F. KELLER**, *Professor Emeritus of Biology; Professor Emeritus in the Community and Technical College* (1954) (Ret. 1982) B.S., University of New Hampshire; Ph.D., Michigan State University, 1953.
- MARTIN L. KEMP**, *Business Manager Emeritus of Wayne General and Technical College* (July 1972) (Ret. December 1988) B.S.Ed., Ashland College; M.S.Ed., Kent State University, 1970.
- FRANK J. KENDRICK**, *Associate Professor Emeritus of Urban Studies* (1971) (Ret. 1989) B.A., Grinnell College; M.A., Ph.D., University of Chicago, 1962.
- JAMES C. KING**, *Professor Emeritus of Education* (1969) (Ret. December 1988) B.A., Mount Union College; M.Ed., Kent State University; Ed.D., Indiana University at Bloomington, 1969.
- LILLIAN M. KING**, *Associate Professor Emeritus of Education* (1966) (Ret. December 1988) B.S.Ed., The University of Akron; M.Ed., Kent State University, 1965.
- CHARLES E. KIRKWOOD**, *Professor Emeritus of Law* (1980) (Ret. June 1994) B.A., Wheaton College; J.D., Northwestern University, 1965.
- GEORGE W. KNEPPER**, *Distinguished Professor Emeritus of History* (August 1954) (Ret. 1992) B.A., The University of Akron; M.A., Ph.D., University of Michigan at Ann Arbor, 1954.
- VINCENT P. KOPY**, *Associate Professor Emeritus of Accounting* (1975) (Ret. December 1989) B.B.A., M.B.A., Case Western Reserve University, 1959; C.P.A., Ohio.
- ALBERT J. KORSOK**, *Associate Professor Emeritus of Geography* (1968) (Ret. 1983) B.S., Case Western Reserve University; M.A., Northwestern University; Ph.D., University of Illinois, 1960.
- JANKO P. KOVACEVICH**, *Professor Emeritus of Education* (1969) (Ret. December 1985) B.S., Baylor University; M.A., The University of Akron; Ph.D., Case Western Reserve University, 1970.
- ERNEST A. KUEHLS**, *Associate Professor Emeritus of Mathematical Sciences* (1965) (Ret. December 1989) B.S.Ed., M.Ed., Miami University; Ph.D., The University of Akron, 1971.
- MILTON L. KULT**, *Professor Emeritus of Electrical Engineering* (January 1954) (Ret. 1983) B.S.E.E., M.S., University of Illinois, 1952; P.E., Illinois, Ohio.
- GAYNOR E. LANIK**, *Assistant Professor Emeritus of Nursing* (August 1981) (Ret. June 1993) B.S., University of Washington; M.S.N., The University of Akron, 1981.
- GORDON K. LARSON**, *Professor Emeritus of Physical Education* (February 1961) (Ret. December 1984) B.S.Ed., M.E., Kent State University, 1954.
- JOSEPH C. LATONA**, *Professor Emeritus of Management and Director Emeritus of the Small Business Institute* (1971) (Ret. May 1994) B.A.Ed., The University of Akron; M.B.A., D.B.A., Kent State University, 1970.
- DOROTHY LAUBACHER**, *Professor Emeritus of Home Economics* (1950) (Ret. 1977) B.S., M.A., The Ohio State University; M.L.S., Kent State University, 1967.
- CAROL W. LAWRENCE**, *Associate Professor Emeritus of Communicative Disorders* (1985) (Ret. May 1994) B.S., The Ohio State University; M.A., Ph.D., Kent State University, 1980.
- NOEL L. LEATHERS**, *Professor Emeritus of History* (July 1972) (Ret. 1988) B.S., M.A., Oklahoma State University; Ph.D., University of Oklahoma at Norman, 1963.
- NADA LEDINKO**, *Professor Emeritus of Biology* (1971) (Ret. 1989) B.S., The Ohio State University; M.S., Pennsylvania State University; Ph.D., Yale University, 1952.
- WALTER D. LEHRMAN**, *Associate Professor Emeritus of English* (1956) (Ret. December 1986) B.S., M.A., Columbia University; Ph.D., Case Western Reserve University, 1972.
- JOSEPH R. LENTINI**, *Professor Emeritus of Criminal Justice Technology* (1969) (Ret. 1987) B.A., State College at Bridgewater (Massachusetts); M.S.T.E., The University of Akron, 1971.
- ARNO K. LEPKE**, *Professor Emeritus of Modern Languages* (1961) (Ret. December 1989) University of Greifswald (Germany); Ph.D., University of Marburg (Germany), 1947.
- GERALD H. LEVIN**, *Professor Emeritus of English* (1960) (Ret. December 1985) A.M., University of Chicago; M.S., Case Western Reserve University; Ph.D., University of Michigan, 1956.
- MARTHA C. LEYDEN**, *Associate Professor Emeritus of Education* (1971) (Ret. December 1989) B.S.E., St. John College; M.Ed., Kent State University; Ed.D., Columbia University, 1971.
- CARL LIEBERMAN**, *Associate Professor Emeritus of Political Science* (1967) (Ret. December 1993) B.A., Temple University; M.A., Ph.D., University of Pittsburgh, 1969.
- M. MARTHA LIERHAUS**, *Assistant Professor Emeritus of Mathematical Sciences* (January 1967) (Ret. December 1989) B.A., B.S.Ed., M.A., Kent State University, 1963.
- EDWIN L. LIVELY**, *Professor Emeritus of Sociology* (1963) (Ret. 1978) B.A.Ed., Fairmont State College (W.Va.); M.A., Ph.D., The Ohio State University, 1959.
- HELEN P. LIVINGSTON**, *Associate Professor Emeritus of Bibliography* (February 1970) (Ret. March 1987) B.A., Bishop's University; M.S., Simmons College, 1954.
- KRIEMHILDE I. R. LIVINGSTON**, *Instructor Emeritus in Modern Languages* (1968) (Ret. May 1994) Diploma, University of Munich (Germany); Diploma, Bavarian Interpreter School (Germany), 1947.
- MARIAN J. LOTT**, *Associate Professor Emeritus of Music* (1967) (Ret. December 1988) B.M., M.M., Roosevelt University, 1951.
- LLOYD B. LUEPTOW**, *Professor Emeritus of Sociology* (1967) (Ret. December 1988) B.S., M.S., Ph.D., University of Wisconsin, 1964.
- LAURENCE J. C. MA**, *Professor Emeritus of Geography and Planning* (1971) (Ret. December 1993) B.A., National Taiwan University; M.A., Kent State University; Ph.D., University of Michigan at Ann Arbor, 1971.
- JOHN A. MacDONALD, JR.**, *Professor Emeritus of Music* (1959) (Ret. May 1994) B.M.Ed., Oberlin College; M.A., Ph.D., University of Michigan at Ann Arbor, 1964.
- KENNETH E. MacDONALD**, *Director Emeritus of Sports Information* (January 1965) (Ret. December 1989) B.S.I.M., The University of Akron, 1963.
- THEODORE MACKIW**, *Professor Emeritus of Modern Languages* (1962) (Ret. 1984) Ph.D., University of Frankfurt, 1950.
- JUDITH E. MAFFETT**, *Assistant Professor Emeritus of Physical Education* (1968) (Ret. 1989) B.S.Ed., M.Ed., Kent State University, 1962.
- MARVIN N. MAIRE**, *Professor Emeritus of Education* (1983) (Ret. August 1988) B.A., Coe College; M.A., University of Iowa; Ph.D., University of Wisconsin, 1965.
- COLEMAN J. MAJOR**, *Dean Emeritus of the College of Engineering; Professor Emeritus of Chemical Engineering* (1964) (Ret. December 1979) B.S., University of Illinois; Ph.D., Cornell University, 1941.
- JOHN MARWITT**, *Professor Emeritus of Anthropology* (1971) (Ret. May 1994) B.S., Florida State University; Ph.D., University of Utah, 1971.
- ARMOLENE J. MAXEY**, *Associate Professor Emeritus of Sociology* (Wayne General and Technical College) (1972) (Ret. August 1987) B.S., University of Nebraska; M.A., Kent State University, 1967.
- KENNETH L.J. McCORMICK**, *Professor Emeritus of Criminal Justice* (1973) (Ret. June 1993) B.S., Michigan State University; M.A., Central Michigan University, 1972.
- JAMES M. McLAIN**, *Professor Emeritus of Economics* (1946) (Ret. 1978) B.A., The University of Akron; M.A., Western Reserve University; Ph.D., The Ohio State University, 1959.
- EDWARD E. McDONALD**, *Professor Emeritus of Mechanical Technology* (1972) (Ret. May 1994) B.S.M.E., M.S.T.E., The University of Akron 1976; P.E., Ohio.
- REGIS Q. McKNIGHT**, *Professor Emeritus of Education* (1972) (Ret. June 1994) B.S., M.Ed., Ed.D., Pennsylvania State University, 1971.
- MARION WHITE McPHERSON**, *Associate Professor Emeritus of Psychology* (1967) (Ret. December 1989) B.A., M.A., University of Maine at Orono; Ph.D., Indiana University at Bloomington, 1949.
- CLAUDE Y. MEADE**, *Professor Emeritus of Modern Languages* (1964) (Ret. December 1989) B.A., M.A., University of Minnesota; Ph.D., University of California at Berkeley, 1957.
- JACK F. MERCER**, *Professor Emeritus in the Community and Technical College* (1965) (Ret. December 1988) A.B., Ohio University; M.A., Case Western Reserve University, 1958.
- R. PAUL MERRIX**, *Professor Emeritus of English* (1966) (Ret. May 1994) B.A., M.A., Butler University; Ph.D., University of Cincinnati, 1966.
- RUTH MESSENGER**, *Assistant Professor Emeritus of English* (1968) (Ret. 1982) B.A., Wellesley College; M.A., The University of Akron; M.A.Ed., Ph.D., Case Western Reserve University, 1976.
- DENNIS A. MEYER**, *Professor Emeritus of Art* (1969) (Ret. June 1995) B.A., St. Norbert College; M.F.A., Ohio University, 1969.
- ALOYSIUS E. MISKO**, *Professor Emeritus of Business Management Technology* (1962) (Ret. December 1984) B.S., Central Michigan University; M.S., Ed.D., University of Michigan, 1962.
- JOHN B. MONROE**, *Professor Emeritus in the Community and Technical College* (1966) (Ret. December 1989) B.A., College of Wooster; M.A., Rutgers University, 1963.
- MARVIN M. MOORE**, *Professor Emeritus of Law* (July 1960) (Ret. May 1994) B.A., Wayne State University; J.D., LL.M., J.S.D., Duke University, 1968.
- FREDERICK W. MOYER**, *Professor Emeritus of Finance* (March 1970) (Ret. 1982) B.S., M.A., Ph.D., The Ohio State University, 1949.
- ROBERT J. MRAVETZ**, *Associate Professor Emeritus of Physical Education* (1970) (Ret. June 1994) B.S.Ed., Miami University; M.Ed., Ohio University; Ph.D., The Ohio State University, 1970.
- BEVERLY J. MUGRAGE**, *Professor Emeritus of the Community and Technical College* (1972) (Ret. May 1994) B.S., Kent State University; M.S., Ph.D., The University of Akron, 1982.
- JOHN E. MULHAUSER**, *Associate Professor Emeritus of Geography and Planning* (1968) (Ret. December 1993) B.A., M.A., Kent State University; J.D., The University of Akron, 1976.
- FRED L. MULLEN**, *Professor Emeritus of Mechanical Technology* (1967) (Ret. June 1993) B.S.E.E., Case Western Reserve University; M.S.E., The University of Akron, 1966; P.E., Ohio.
- JOSEPH C. MULLIN**, *Assistant Professor Emeritus of Criminal Justice* (1970) (Ret. 1988) B.S., Delta State College; M.S.Tech.Ed., The University of Akron, 1974.
- RUTH C. MURRAY**, *Rubber Division Literature Chemist Emeritus* (July 1970) (Ret. December 1993) B.S., Chatham College, 1944.
- ROBERT H. MYERS**, *Professor Emeritus of Education* (1966) (Ret. 1986) B.S.Ed., M.A., Ph.D., The Ohio State University, 1964.
- NOBUYUKI NAKAJIMA**, *Professor Emeritus of Polymer Engineering* (1984) (Ret. May 1994) B.S., Tokyo University; M.S., Polytechnic Institute; Ph.D., Case Institute of Technology, 1958.
- THOMAS L. NASH**, *Professor Emeritus of Geography and Planning* (1967) (Ret. June 1994) B.A., M.A., Ph.D., Kent State University, 1973.
- RICHARD NEAL**, *Equal Employment Opportunity and Affirmative Action Officer Emeritus* (March 1970) (Ret. December 1988) B.A., The University of Akron, 1961.
- SAMUEL C. NEWMAN**, *Professor Emeritus of Sociology* (1951) (Ret. 1973) B.A., University of Pittsburgh; M.A., Oberlin College; Ph.D., The Ohio State University, 1939.
- DAVID L. NICHOLS**, *Associate Professor Emeritus of Accounting* (1971) (Ret. 1987) B.B.A., M.B.A., University of Houston; Ph.D., University of Arkansas, 1978; C.P.A., Texas.
- WALLACE H. NOLIN**, *Professor Emeritus of Music* (1969) (Ret. December 1989) B.S., Muskingum College; M.M.E., Kent State University; Ph.D., The Ohio State University, 1969.
- JAMES W. NOLTE**, *Associate Professor Emeritus of Real Estate* (1972) (Ret. June 1993) B.A., M.A., The University of Akron, 1972.
- DOROTHY M. NUNN**, *Associate Professor Emeritus of Biology* (1967) (Ret. 1983) B.S. Med. Tech., Ph.D., University of Cincinnati, 1962.
- OLIVER OCASEK**, *Professor Emeritus of Education* (January 1961) (Ret. December 1978) B.S.Ed., M.A., Kent State University, 1950; LL.D., Kent State University, 1975; Litt. D., The University of Akron, 1978.
- ROBERT A. OETJEN**, *Dean Emeritus of Buchtel College of Arts and Sciences; Professor Emeritus of Physics* (July 1970) (Ret. 1977) B.A. Asbury College; M.S., Ph.D., University of Michigan, 1942.
- JOHN H. OLIVE**, *Professor Emeritus of Biology* (1970) (Ret. June 1994) B.S., The Ohio State University; M.A., Ph.D., Kent State University, 1964.
- SARAH ORLINOFF**, *Associate Professor Emeritus of Education* (1963) (Ret. 1978) B.A., M.A.Ed., The University of Akron; Ph.D., Case Western Reserve University, 1963.

- JOHN OWEN**, *Director Emeritus of Admissions* (June 1965) (Ret. August 1993) B.A., Johns Hopkins University; M.A., The University of Akron, 1973.
- D'ORSAY W. PEARSON**, *Professor Emeritus of English* (1966) (Ret. December 1989) B.A., University of North Carolina at Greensboro; M.A., University of Florida; Ph.D., Kent State University, 1969.
- NORMA J. PEARSON**, *Assistant Professor Emeritus of Bibliography* (May 1979) (Ret. June 1994) B.A., M.L.S., M.A., Kent State University, 1978.
- JON ROBERT PESKE**, *Associate Professor Emeritus in the Community and Technical College* (1969) (Ret. June 1995) B.A., M.A., The University of Akron, 1969.
- ISOBEL L. PFEIFFER**, *Professor Emeritus of Education* (1966) (Ret. 1982) B.A., Manchester College; M.S., Indiana University; Ph.D., Kent State University, 1966.
- MARVIN E. PHILLIPS**, *Director of Public Services Emeritus* (July 1972) (Ret. December 1988) A.A., Flint Community College; B.A., Albion College; M.A., Michigan State University, 1952.
- JOHN S. PHILLIPSON**, *Professor Emeritus of English* (1961) (Ret. 1986) B.A., University of Rochester; M.A., Ph.D., University of Wisconsin, 1952.
- IRJA PIRMA**, *Professor Emeritus of Polymer Science* (December 1952) (Ret. 1990) Diploma in Chemistry, Technische Hochschule of Darmstadt (Germany); M.S., Ph.D., The University of Akron, 1960.
- JOHN C. PIZOR**, *Associate Professor Emeritus of Office Administration* (1966) (Ret. 1985) B.S., Grove City College; M.Ed., University of Pittsburgh, 1946.
- ELLEN SUE POLITELLA**, *Associate Emeritus Professor of History* (Wayne General and Technical College) (1972) (Ret. August 1988) B.A., Kent State University; M.A., Oberlin College, 1960.
- ARTHUR R. POLLOCK, JR.**, *Professor Emeritus of Social Science* (1967) (Ret. June 1993) B.S.Ed., Indiana University of Pennsylvania; M.A., Case Western Reserve University, 1968.
- MARGARET M. POLOMA**, *Professor Emeritus of Sociology* (1970) (Ret. June 1995) B.A., Notre Dame College of Ohio; M.A., Ph.D., Case Western Reserve University, 1970.
- CHARLES F. POSTON**, *Professor Emeritus of Finance* (1959) (Ret. 1980) B.A., Eastern Illinois State College; M.A., University of Illinois; Ph.D., University of North Carolina, 1959.
- JOHN H. RAMEY**, *Associate Professor Emeritus of Social Work* (1969) (Ret. December 1989) B.A., M.S.W., The Ohio State University, 1950.
- GEORGE E. RAYMER**, *Director Emeritus of Communications* (August 1961) (Ret. December 1988) B.A., Kent State University; B.A.Ed., M.A.Ed., The University of Akron, 1968.
- HOWARD S. REINMUTH, JR.**, *Associate Professor Emeritus of History* (1966) (Ret. July 1993) B.A., M.A., Ph.D., University of Minnesota, 1958.
- ALVIN M. RICHARDS**, *Professor Emeritus of Civil Engineering* (June 1949) (Ret. December 1983) B.C.E., The University of Akron; M.S., Harvard University; Ph.D., University of Cincinnati, 1968; P.E., Ohio, Florida.
- JAMES F. RICHARDSON**, *Professor Emeritus of History, Professor Emeritus of Urban Studies* (1967) (Ret. 1992) B.A., Iona College; Ph.D., New York University, 1961.
- DAVID C. RIEDE**, *Professor Emeritus of History* (1955) (Ret. December 1989) B.A., M.A., Ph.D., University of Iowa, 1957.
- RICHARD S. ROBERTS**, *Professor Emeritus of Accounting* (1964) (Ret. December 1989) B.B.A., University of Cincinnati; M.B.A., Ph.D., The Ohio State University, 1966. C.P.A., Ohio.
- ROBERT W. ROBERTS**, *Professor Emeritus of Chemical Engineering* (1966) (Ret. December 1988) B.S.Ch.E., Washington University; M.S.Ch.E., Ph.D.Ch.E., University of Iowa, 1962.
- LOUIS D. RODABAUGH**, *Associate Professor Emeritus of Mathematics* (1964) (Ret. 1978) B.A., Miami University; M.A., Ph.D., The Ohio State University, 1938.
- LINDA J. RODDA**, *Professor Emeritus of Office Administration* (1967) (Ret. June 1993) B.S.Ed., M.A., The University of Akron, 1969.
- CECIL A. ROGERS**, *University Auditor Emeritus* (1932) (Ret. 1969) B.S.B.A., The University of Akron, 1932.
- WILLIAM ROOT**, *Professor Emeritus of Education* (1968) (Ret. 1982) B.S., M.A., Ph.D., The Ohio State University, 1958.
- HENRY S. ROSENQUIST**, *Associate Professor Emeritus of Psychology* (1965) (Ret. December 1988) B.S., M.A., Columbia University; Ph.D., Tulane University of Louisiana, 1964.
- LOUIS ROSS**, *Professor Emeritus of Mathematics* (February 1946) (Ret. 1977) B.S., B.A., M.A.Ed., The University of Akron; Ph.D., Case Western Reserve University, 1955.
- MICHAEL B. ROSS**, *Associate Professor Emeritus of Education* (1973) (Ret. July 1995) B.S.Ed., Shippensburg State College; M.Ed. Ed.D., Pennsylvania State University, 1974.
- MARION A. RUEBEL**, *Dean Emeritus of University College and Professor Emeritus of Education* (1970) (Ret. June 1994) B.A., M.A., University of Northern Iowa; Ph.D., Iowa State University, 1969.
- RICHARD W. RYMER**, *Counseling Psychologist Emeritus* (August 1970) (Ret. June 1993) B.S., M.A., Kent State University, 1961.
- BLIN B. SCATTERDAY**, *Professor Emeritus in the Community and Technical College* (1964) (Ret. December 1989) B.A., M.A.Ed., The University of Akron, 1963.
- ROBERT G. SCHMIDT**, *Associate Professor Emeritus of Sociology* (1967) (Ret. 1980) B.A., Illinois College; M.A.T., Harvard University; Ph.D., Washington University, 1955.
- RONALD E. SCHNEIDER**, *Associate Professor Emeritus of Physics* (1962) (Ret. June 1993) B.S., The University of Akron; M.S., Virginia Polytechnic Institute; M.S., John Carroll University; Ph.D., Case Western Reserve University, 1964.
- JOAN C. SEIFERT**, *Professor Emeritus of Education* (1967) (Ret. December 1988) B.S.Ed., M.Ed., Ph.D., Kent State University, 1967.
- WALTER A. SHEPPE**, *Professor Emeritus of Biology* (1968) (Ret. December 1988) B.S., College of William and Mary; M.A., Ph.D., University of British Columbia, 1958.
- ROY V. SHERMAN**, *Professor Emeritus of Political Science* (1929) (Ret. 1967) B.A., M.A., Ph.D., State University of Iowa, 1927.
- ANDREW L. SIMON**, *Professor Emeritus of Civil Engineering* (1965) (Ret. June 1989) C.E. Diploma, Technical University of Budapest; Ph.D., Purdue University, 1962; P.E., Ohio, West Virginia, Indiana.
- FRANK L. SIMONETTI**, *Professor Emeritus of Management* (1942-1943), (1945) (Ret. 1981) B.S., The University of Akron; M.B.A., Boston University; D.B.A., Indiana University, 1954.
- HOWARD K. SLAUGHTER**, *Professor Emeritus of Theatre Arts* (1967) (Ret. December 1988) A.A., San Francisco City College; B.A., University of California at Berkeley; M.A., University of Hawaii; Ph.D., University of Pittsburgh, 1966.
- MARY VERNON SLUSHER**, *Associate Professor Emeritus of Accounting* (1947) (1954) (Ret. 1971) B.S., M.A., Virginia Polytechnic Institute, 1931; C.P.A., Virginia.
- HENRY P. SMITH**, *Associate Professor Emeritus of Music* (1947) (Ret. 1978) B.M., Illinois Wesleyan University; M.A., Carnegie Institute of Technology; Ed.D., Columbia University, Teachers College, 1949.
- HERBERT W. SMITH, JR.**, *Professor Emeritus of Modern Languages* (1956) (Ret. 1988) B.A., Brigham Young University; M.A., Ph.D., University of Wisconsin, 1956.
- RAMON F. STEINEN**, *Professor Emeritus of Education* (1969) (Ret. 1987) B.A., M.A., Montclair State College; Ph.D., The Ohio State University, 1966.
- JANE M. STEINER**, *Associate Professor Emeritus in the Community and Technical College* (1968) (Ret. July 1978) B.A., The University of Akron; M.A., Western Reserve University, 1945.
- HOWARD L. STEPHENS**, *Professor Emeritus of Polymer Science; Professor Emeritus of Chemistry* (June 1950) (Ret. 1982) B.S., M.S., Ph.D., The University of Akron, 1960.
- WARREN P. STOUTAMIRE**, *Professor Emeritus of Biology* (1966) (Ret. May 1991) B.S., Roanoke College; M.S., University of Oregon; Ph.D., Indiana University at Bloomington, 1954.
- MICHAEL N. SUGARMAN**, *Professor Emeritus of Education* (1970) (Ret. December 1993) B.S.B.A., Ed.M., Ed.D., State University of New York at Buffalo, 1966.
- JOY S. SWAN**, *Professor Emeritus of Education* (1967) (Ret. December 1988) B.S., Carnegie-Mellon University; M.LITT., M.Ed., D.Ed., University of Pittsburgh, 1964.
- LEONARD SWEET**, *Professor Emeritus of Mathematical Sciences* (1959) (Ret. December 1986) B.A. Ed., The University of Akron; M.Ed., Kent State University; Ph.D., Case Western Reserve University, 1970.
- JAMES D. SWITZER**, *Professor Emeritus in the Community and Technical College* (1965) (Ret. June 1995) B.A., College of Wooster; M.A., Kent State University, 1965.
- GEORGE L. SZOKE**, *Associate Professor Emeritus of Mathematical Sciences* (1963) (Ret. December 1992) B.S.M.E., Polytechnical University of Budapest; M.S.E., The University of Akron; Ph.D.Eng., Technical University of Budapest, 1980.
- JOSEPH A. TAKACS**, *Professor Emeritus of Electronic Technology* (1974) (Ret. May 1994) B.S.E.E., M.S.E.E., The University of Akron, 1961.
- CATHRYN C. TALLAFERRO**, *Assistant Professor Emeritus of English* (1961) (Ret. 1981) B.A., The University of Akron; M.A., Radcliffe College, 1940.
- HOWARD L. TAYLOR**, *Professor Emeritus of Management* (1963) (Ret. December 1988) B.S., The University of Akron; M.S., Ph.D., Iowa State University, 1958.
- PATRICIA J. TAYLOR**, *Assistant Professor Emeritus of Physical Education* (1962) (Ret. December 1989) B.S.Ed., The University of Akron; M.A., Kent State University, 1972.
- RONALD D. TAYLOR**, *Professor Emeritus of Art* (1964) (Ret. June 1993) B.F.A., M.A., The Ohio State University, 1963.
- JAMES W. TEETER**, *Professor Emeritus of Geology* (1965) (Ret. May 1994) B.S.C., M.S.C., McMaster University; Ph.D., Rice University, 1966.
- STUART M. TERRASS**, *Director of Institutional Studies and Research Emeritus* (December 1957) (Ret. March 1986) B.A., B.S., M.A., The University of Akron, 1965.
- ROBERT M. TERRY**, *Professor Emeritus of Sociology* (1971) (Ret. December 1989) B.A., M.A., Ph.D., University of Wisconsin, 1965.
- HELEN S. THACKABERRY**, *Assistant Professor Emeritus of English* (1940) (Ret. 1976) B.A., M.A., State University of Iowa, 1937.
- JACK E. THOMPSON**, *Associate Professor of Business Management Technology* (January 1974) (Ret. December 1991) B.S.B.A., Kent State University; M.S., The University of Akron, 1975; C.P.A.
- DONALD C. THORN**, *Professor Emeritus of Electrical Engineering* (1967) (Ret. 1987) B.S.E.E., Texas A&M College; M.S.E.E., Ph.D.E.E., University of Texas at Austin, 1958; P.E., New Mexico, Ohio, Texas.
- DAVID H. TIMMERMAN**, *Associate Professor Emeritus of Civil Engineering* (1962) (1967) (Ret. 1989) B.S.C.E., M.S., Ohio University; Ph.D., Michigan State University, 1969; P.E., Ohio.
- EVELYN M. TOVEY**, *Professor Emeritus of Nursing* (1950) (Ret. November 1978) B.S.N., M.S.N., Case Western Reserve University, 1950.
- AUDRA TUCKER**, *Associate Professor Emeritus of Secretarial Science* (1926) (Ret. 1970) B.A., The University of Akron; M.A., New York University, 1936.
- GENEVIEVE H. TURLIK**, *Assistant Professor Emeritus of Medical Assisting Technology* (1971) (Ret. 1988) B.A., M.S. Tech.Ed., The University of Akron, 1980.
- PAUL UHLINGER**, *Professor Emeritus of Philosophy* (1968) (Ret. 1979) B.A., Youngstown University; B.D., Oberlin College; Ph.D., Boston University, 1953.
- JANET B. VAN DOREN**, *Associate Professor Emeritus of Chemical Technology* (1983) (Ret. June 1993) B.S., University of Illinois; M.S., Michigan State University, 1956.
- KATHRYN A. VEGSO**, *Member of the General Faculty Emeritus* (February 1959) (Ret. January 1986) B.S., University of Illinois; M.S.Ed., The University of Akron, 1964.
- RICHARD F. VIERING**, *Professor Emeritus of Education* (1982) (Ret. December 1989) B.S., M.S., Ph.D., Kent State University, 1970.
- ANNA M. VOORHEES**, *Associate Professor Emeritus of Bibliography* (1971) (Ret. December 1989) B.S.Ed., B.Mus., The Ohio State University; M.A., Kent State University, 1964.
- EDWIN E. WAGNER**, *Professor Emeritus of Psychology* (1959) (Ret. August 1989) B.A., M.A., Ph.D., Temple University, 1959.
- JANET W. WAISBROT**, *Assistant Professor Emeritus of Modern Languages* (1965) (Ret. August 1985) B.A., Case Western Reserve University; M.A., Kent State University, 1966.
- MILTON WALES**, *Assistant Professor Emeritus of Mechanical Technology* (1966) (Ret. 1977) B.S., Louisiana State University; M.Ed., Pennsylvania State University, 1966.
- JOAN E. WARNER**, *Professor Emeritus of Office Administration* (1964-1971) (1975) (Ret. October 1987) B.S., M.S.Ed., The University of Akron, 1966.
- VIRGINIA J. WATKINS**, *Associate Professor Emeritus of Office Administration* (1967) (Ret. December 1988) B.A.Ed., M.A.Ed., Arizona State University, 1953.
- JOHN STEWART WATT**, *Professor Emeritus of Education* (1956) (Ret. June 1989) B.A., The University of Akron; M.A., Ph.D., University of Chicago, 1950.
- WILLIAM V. WEBB**, *Assistant Professor Emeritus in the Community and Technical College* (1968) (Ret. 1989) B.A., University of Notre Dame; M.S., John Carroll University, 1960.
- WYATT M. WEBB**, *Associate Professor Emeritus of Physical Education* (1967) (Ret. June 1994) B.S.Ed., The University of Akron; M.S.Ed., University of Cincinnati; Ph.D., The Ohio State University, 1967.

**PAUL WEIDNER**, *Professor Emeritus of Political Science* (1960) (Ret. December 1984) B.A., M.A., University of Cincinnati; Ph.D., University of Michigan, 1959.

**RUSSELL WEINGARTNER**, *Professor Emeritus of Modern Languages* (1970) (Ret. 1986) B.A., University of Cincinnati; M.S., Ph.D., Princeton University, 1968.

**EDITH K. WEINSTEIN**, *Professor Emeritus of the Community and Technical College* (1969) (Ret. May 1994) B.A., M.A.Ed., The University of Akron, 1968.

**ARTHUR G. WENTZ**, *Associate Professor Emeritus of Finance* (1982) (Ret. June 1994) B.S.B.A., Duquesne University; M.B.A., University of Pittsburgh; Ph.D., The Ohio State University, 1969.

**ROBERT C. WEYRICK**, *Dean Emeritus in the Community and Technical College; Professor Emeritus in the Community and Technical College* (February 1965) (Ret. December 1988) B.E.E., The University of Akron; M.S., Case Institute of Technology, 1965; P.E., Ohio.

**JEAN R. WILLIAMS**, *Associate Professor Emeritus of Home Economics* (1973) (Ret. December 1990) B.S., Iowa State University; M.S., The University of Akron, 1972.

**MAURICE WILLIAMS**, *Professor Emeritus of Education* (1966) (Ret. December 1988) B.A., The University of Akron; M.E., Kent State University; Ed.D., Case Western Reserve University, 1962.

**RICHARD A. WILLIAMS**, *Associate Professor Emeritus of Electrical Engineering* (1968) (Ret. 1989) B.S., M.S., Ph.D., The Ohio State University, 1965; P.E., Ohio.

**CHARLES W. WILSON III**, *Professor Emeritus of Physics and Polymer Science* (1965) (Ret. December 1989) B.S.E., M.S., University of Michigan at Ann Arbor; Ph.D., Washington University, 1952.

**JOHN W. WILSON**, *Member of the General Faculty, Emeritus* (July 1970) (Ret. December 1989) B.S., Albany State College; M.S.Ed., Ed.D., The University of Akron, 1983.

**MARY H. WILSON**, *Assistant Professor Emeritus of Home Economics* (April 1943) (Ret. 1972) B.S., Iowa State College, 1932.

**PAUL S. WINGARD**, *Associate Dean Emeritus of the Buchtel College of Arts and Sciences; Professor Emeritus of Geology* (February 1966) (Ret. December 1989) B.A., M.S., Miami University; Ph.D., University of Illinois at Urbana, 1960.

**JAMES A. WITHEROW**, *Assistant Professor Emeritus of Physical Education* (1972) (Ret. December 1984) B.S., M.Ed., Kent State University, 1956.

**MARY O. WITWER**, *Professor Emeritus of Office Administration* (1971) (1972) (Ret. December 1988) B.S., The University of Akron; M.E., Ohio University, 1951.

**CHARLES L. WOOD**, *Associate Professor Emeritus of Education* (1966) (Ret. January 1986) B.A., Simpson College; M.A., Ph.D., University of Iowa, 1966.

**JOHN W. WORKS**, *Associate Professor Emeritus of Finance* (1981) (Ret. 1989) B.A., Brown University; J.D., Ohio Northern University; M.B.A., Ph.D., Northwestern University, 1968.

**ROBERT L. ZANGRANDO**, *Professor Emeritus of History* (1971) (Ret. May 1994) B.A., Union College; M.A., Ph.D., University of Pennsylvania, 1963.

**HANS O. ZBINDEN**, *Assistant Professor Emeritus of Modern Languages* (1965) (Ret. June 1995) B.A., Wittenberg University; M.A., University of Pennsylvania; Ph.D., Pennsylvania State University, 1971.

## Full-Time Faculty and Administration\*

September 1995

**PEGGY GORDON ELLIOTT**, *President of the University; Professor of Education; Harrington Distinguished Chair in the College of Education* (August 1992) B.A., Transylvania College; M.S., Northwestern University; Ed.D., Indiana University, 1975.

**ABDULLAH ABONAMAH**, *Associate Professor of Mathematical Sciences* (1989) B.S., University of Dayton; M.S., Wright State University; Ph.D., Illinois Institute of Technology, 1986.

**STEPHEN H. ABY**, *Education Bibliographer; Assistant Professor of Bibliography* (August 1988) B.A., University of Texas at Austin; M.A., University of Houston; Ph.D., State University of New York at Buffalo; M.L.S., Kent State University, 1984.

**RONNIE G. ADAMS**, *Professor of Surveying and Construction Technology* (1969) B.C.E., Cleveland State University; M.S.C.E., Lehigh University, 1963.

**STANLEY W. AKERS**, *Assistant Professor of Bibliography; Communications and Human Relations Bibliographer* (January 1967) B.S.Ed., M.A., The University of Akron; Ph.D., Kent State University, 1989.

**CAROLYN A. ALBANESE**, *Associate Professor of Home Economics and Family Ecology* (1978) B.S., Southern Illinois University at Carbondale; M.S., The Ohio State University, 1969.

**ROBERT ALBRIGHT**, *Senior Military Science Instructor* (August 1992) Sergeant First Class.

**M. KAY ALDERMAN**, *Professor of Education* (1979) B.S., University of Southern Mississippi; M.Ed., University of Texas at Austin; Ed.D., University of Houston, 1976.

**TANA F. ALEXANDER**, *Associate Professor of Music* (1978) B.M., The Ohio State University; M.M., University of Louisville, 1974.

**RICHARD W. ALFORD**, *Associate Professor of Hospitality Management* (1983) A.D., B.S., M.S., The University of Akron, 1987.

**MICHAEL L. ALLEN**, *Senior Director of Maintenance and Operations* (February 1991) B.E., Youngstown State University, 1984; P.E.

**REENE A. ALLEY**, *Associate Professor of Education* (1989) B.S., Ball State University; M.A., Purdue University; Ed.D., Indiana University, 1981.

**VINCENT A. ALTER**, *Assistant to the Dean, Polymer Science and Polymer Engineering; Financial and Safety Officer of the College of Polymer Science and Polymer Engineering* (January 1983) A.B., Youngstown State University; M.S., The University of Akron, 1954.

**RICHARD E. AMOS**, *Coordinator of Medical Technology Program* (1985) B.S., University of Michigan; M.A., Central Michigan University; M.S., University of Cincinnati, 1982.

**ALFRED L. ANDERSON**, *Professor of Music* (1985) B.M.E., Mississippi College; M.M., Indiana University, 1970.

**ALLEN S. ANDERSON**, *Assistant Professor of Finance* (1984) B.S.C.E., B.B.A., M.B.A., Texas A&M University; Ph.D., University of Arkansas, 1978.

**LOYD C. ANDERSON**, *Professor of Law* (August 1981) B.A., University of Michigan; J.D., Harvard University, 1973.

**THOMAS E. ANDES**, *Associate Professor of Business Management Technology* (Wayne College) (1983) B.S.Ed., The University of Akron; M.M., Northwestern University, 1979.

**WILLIAM B. ARBUCKLE**, *Associate Professor of Civil Engineering* (July 1982) B.S.Ch.E., Ohio University; M.S.E.E., Ph.D., University of North Carolina, 1975.

**GARY J. ARCHAMBAULT**, *Professor of Aerospace Studies* (1993) B.S., University of Wisconsin-Superior; M.S., U.S. International University-San Diego, 1980; Lt. Col., Missile Officer.

**ROBIN DIANE ARNOLD**, *Associate Professor of Physical Education* (Wayne College) (1972) B.S., University of Maryland at College Park; M.A., The Ohio State University; M.S., The University of Akron, 1991.

**STEPHEN ARON**, *Associate Professor of Music* (1981) B.M., University of Hartford; M.M., University of Arizona, 1981.

**JOANN M. ARRIETTA**, *Institutional Research Associate* (December 1975) B.A.Ed., M.A.Ed., The University of Akron, 1975.

**JOHN H. ASHLEY**, *Production Coordinator of Print Media, University Media Production* (1973) B.S., Southern Illinois University at Carbondale; M.S., Indiana University at Bloomington, 1973.

**MARK S. AUBURN**, *Interim Director of the School of Theatre Arts; Professor of English* (July 1991) B.S., B.A., The University of Akron; M.A., Ph.D., University of Chicago, 1971.

**NORMAN P. AUBURN**, *Consultant, President Emeritus of the University; Professor Emeritus of Political Science* (1951) (ret. as President 1971; Consultant 1971-) B.A., University of Cincinnati, 1927; LL.D., Parsons College, 1945; LL.D., University of Cincinnati, 1952; D.Sc., University of Tulsa, 1957; LL.D., University of Liberia (West Africa), 1959; Litt.D., Washburn University of Topeka, 1961; L.H.D., College of Wooster, 1963; LL.D., The University of Akron, 1971; D.C.L., Union College, 1979.

**KENNETH E. AUPELLERLE**, *Professor of Management* (1986) B.A., M.A., Western Michigan University; M.B.A., Kansas State University; Ph.D., University of Georgia, 1982.

**JAMES F. AUSTIN**, *Associate Professor of Education; Coordinator of School Psychology* (1987) B.A., M.A., Ph.D., Case Western Reserve University, 1971.

**RICHARD L. AYNES**, *Dean of School of Law; Professor of Law* (1976) B.S., Miami University; J.D., Cleveland State University, 1974.

**ROGER J. BAIN**, *Professor of Geology; Department Chair of Geology* (1970) B.S., M.S., University of Wisconsin; Ph.D., Brigham Young University, 1968.

**J. WAYNE BAKER**, *Professor of History; General Studies Course Director; Western Cultural Traditions* (1968) B.A., Western Baptist College; B.D., Talbot Theological Seminary; B.A., Pepperdine University; M.A., Ph.D., University of Iowa, 1970.

**PHILIP R. BALDWIN**, *Associate Professor of Physics; Associate Professor of Chemistry; Associate Professor of Mathematical Sciences; Associate Professor Mechanical Engineering* (1990) B.A., Princeton University; Ph.D., University of Illinois at Urbana, 1987.

**DANNY L. BALFOUR**, *Associate Professor of Public Administration and Urban Studies* (1990) B.A., Michigan State University; Ph.D., Florida State University, 1990.

**KIMETRIS N. BALTRIP**, *Assistant Professor in Community and Technical College; Advisor of Students* (July 1995) B.A., Prairie View Agricultural-Mechanical University; M.A., The University of Akron, 1992.

**CHRISTOPHER P. BANKS**, *Assistant Professor of Political Science* (1995) B.A., University of Connecticut; J.D., University of Dayton, 1984.

**SHELLEY O. BARANOWSKI**, *Professor of History* (1989) B.A., Wells College; M.A., Ph.D., Princeton University, 1980.

**ANTHONY E. BARNES**, *Writer/Media Liaison* (June 1989) B.S., Ohio University, 1986.

**ANNA MARIA BARNUM**, *Professor in the Community and Technical College* (1970) B.A., Middlebury College; M.A., University of Vermont; J.D., The University of Akron, 1977.

**GERALD V. BARRETT**, *Professor of Psychology* (1973) B.A., Wittenberg University; M.S., Ph.D., Case Western Reserve University; J.D., The University of Akron, 1985.

**LINDA R. BARRETT**, *Assistant Professor of Geography and Planning* (1995) B.A., M.A., Michigan State University, 1991.

**PHILLIP E. BARTLETT**, *Director of Space Utilization-Physical Facilities* (January 1967) B.A., Kent State University, 1963.

**ABEL A. BARTLEY**, *Assistant Professor of History* (1994) B.A., M.A., Ph.D., Florida State University, 1994.

**ONKER N. BASU**, *Assistant Professor of Accounting* (1991) B.Com., M.M.S., University of Bombay; Ph.D., Pennsylvania State University, 1992.

**CELAL BATUR**, *Professor of Mechanical Engineering* (February 1980) B.Sc., M.Sc., The Technical University of Istanbul; Ph.D., The University of Leicester, 1976.

**JOAN E. BAUMGARDNER**, *Assistant Professor of Nursing; Coordinator of Senior Year* (1979) B.S.N., M.S.N., The Ohio State University; Ph.D., The University of Akron, 1988.

**GARY A. BAYS**, *Associate Professor of English* (Wayne College) (1986) B.S., M.A., Central Michigan University, 1984.

**THOMAS G. BECK**, *General Manager of WZIP FM; Adjunct Assistant Professor of Communications* (June 1978) B.S., Slippery Rock State College; M.A., Ohio University, 1975.

**JOHN D. BEE**, *Professor of Communication; Director of the School of Communication; General Studies Course Director; Speech; Director of Instructional Delivery Systems* (1969) B.A., Ohio University; M.A., Ph.D., University of Wisconsin at Madison, 1972.

**ROSE A. BEESON**, *Instructor in Nursing* (1993) B.S., The Ohio State University; B.S., Ursuline College; M.S., Case Western Reserve University, 1992.

**HAROLD BELOFSKY**, *Associate Professor of Mechanical Technology* (1987) B.S.M.E., Cooper Union; M.M.E., New York University, 1952; P.E., Ohio.

**JUTTA T. BENDREMER**, *Assistant Professor of English* (1967) B.A., Hunter College; M.A., Brooklyn College, 1951.

**RODNEY B. BENGSTON**, *Director of University Galleries* (February 1992) B.A., Allegheny College; M.F.A., Kent State University, 1982.

\* The dates in parentheses indicate the beginning of service at The University of Akron; unless otherwise stated, service began in the month of September.

- MICHAEL S. BENNETT**, *Associate Professor of Social Science* (1976) B.S., M.S., Ph.D., The Ohio State University, 1976.
- THOMAS B. BENNETT**, *Director of Audio Visual Services* (June 1976) B.A., The University of Akron, 1979.
- ARIS BEOGLOS**, *Instructor in Nursing* (1988) B.S.N., The University of Akron; M.S.N., Case Western Reserve University, 1988.
- DAVID S. BERNSTEIN**, *Professor of Music* (1972) B.M., M.M., Florida State University; D.M., Indiana University at Bloomington, 1974.
- VIRGINIA M. BERRINGER**, *Cataloger; Assistant Professor of Bibliography* (1973) B.A., The University of Akron; M.L.S., Kent State University, 1982.
- THOMAS M. BESCH**, *Instructor in Surveying and Construction Technology* (1992) A.A., University of Maryland at Baltimore; A.S., Pensacola Junior College; B.S., University of Maryland at Baltimore, 1992.
- JULIA M. BEYELER**, *Director of Learning Support Services; Adjunct Assistant Professor of Education* (Wayne College) (August 1988) B.S.Ed., Goshen College; M.Ed., Kent State University, 1965.
- KIMBERLY A. BEYER**, *Academic Adviser* (1992) B.A., M.A., Ph.D., The University of Akron, 1989.
- WILLIAM H. BEYER**, *Acting Associate Vice President for Administrative Support Services; Professor of Mathematical Sciences* (1961) B.S., The University of Akron; M.S., Ph.D., Virginia Polytechnic Institute, 1961.
- ALICE G. BIER**, *Director of International Programs* (July 1994) B.A., University of Washington; M.A., Ph.D., Cornell University; M.A., Harvard University 1994.
- CLIFFORD G. BILLIONS**, *Professor of Music* (1978) B.M., Oklahoma Baptist University; M.M., Converse College, 1971.
- KARIN J. BILLIONS**, *Assistant Professor of Communication* (Wayne College) (1988) B.A., Oklahoma Baptist University; M.A., The University of Akron; Ph.D., Kent State University, 1992.
- WIESLAW K. BINIENDA**, *Associate Professor of Civil Engineering* (1988) M.S., Warsaw Technical University; M.S.M.E., Ph.D., Drexel University, 1988.
- ERIC R. BIRDSALL**, *Professor of English* (June 1987) B.A., California State University; M.A., Ph.D., The Johns Hopkins University, 1976.
- MILTON A. BLACKMON**, *Academic Adviser* (January 1987) B.A., Oakwood College; M.Ed., Fayetteville State University; Ph.D., The University of Akron, 1992.
- JEAN L. BLOSSER**, *Professor of Communicative Disorders; Director of the Speech and Hearing Center* (January 1979) B.A., Ohio University; M.A., Kent State University, Ed.D., The University of Akron, 1986.
- ONADEL J. BLY**, *Assistant Professor of Bibliography* (April 1974) B.A., Mount Union College; M.L.S., Kent State University, 1991.
- JOHN A. BOA, III**, *Assistant Men's Soccer Coach* (1993) B.A., Belmont Abbey College, 1989.
- DEBORAH L. BOBINETS**, *Assistant Law Librarian for Technical Services* (July 1989) B.A., The University of Akron; M.L.S., Kent State University, 1988.
- MICHAEL A. BOBINSKI**, *Director of Athletics* (April 1994) B.A., University of Notre Dame, 1979.
- ALAN K. BODMAN**, *Professor of Music* (1986) B.M., Michigan State University; M.M., University of Michigan, 1973.
- ANN D. BOLEK**, *Physical Sciences Bibliographer; Assistant Professor of Bibliography* (1984) B.S.Ch.E., Purdue University; M.B.A., M.L.S., Kent State University, 1984.
- MARTHA A. BOOTH**, *Associate University Registrar* (June 1971) B.S.Ed., M.S.Ed., The University of Akron, 1979.
- DALE S. BOROWIAK**, *Professor of Mathematical Sciences* (1980) B.S., M.S., The University of Akron; Ph.D., Bowling Green State University, 1980.
- ANDREW BOROWIEC**, *Professor of Art* (1984) B.A., Haverford College; M.F.A., Yale University, 1982.
- CONSTANCE B. BOUCHARD**, *Professor of History* (August 1990) B.A., Middlebury College; M.A., Ph.D., University of Chicago, 1976.
- KAREN E. BOUGHTON**, *Instructor in Computer Programming Technology* (1993) A.A.S., B.A., The University of Akron, 1985.
- DOLORES A. BOWER**, *Professor of Nursing; Associate Dean of the Graduate Program-Nursing* (1983) B.S., University of Rhode Island; M.S.N., Boston University; Ph.D., Kent State University, 1983.
- MARILYN K. BOWMAN**, *Head Athletic Trainer* (1991) B.S.Ed., M.S., The University of Akron, 1987.
- NANCY BRACHER**, *Associate Director of University Communications-Production Manager* (October 1986) B.A., Southwestern at Memphis, 1978.
- WILLIAM K. BRADEN**, *Air Force ROTC Regional Director of Admissions* (1995) B.S., Pennsylvania State University; M.S., Air Force Institute of Technology, 1987; Major, USAF, Contracting Officer.
- LARRY G. BRADLEY**, *Associate Dean of the College of Education; Professor of Education* (1969) B.A., Muskingum College; M.A., West Virginia University; Ph.D., Ohio University, 1969.
- IRVIN W. BRANDEL**, *Director of the Counseling and Testing Center; Adjunct Associate Professor of Home Economics and Family Ecology* (July 1969) B.S., Bowling Green State University; M.A., Michigan State University; Ph.D., The University of Akron, 1975.
- SALLY M. BRANDEL**, *Director of Student Assistance Center; Counseling Psychologist* (1981) B.S., Indiana University; M.S., Ph.D., The University of Akron, 1979.
- WILLIAM T. BRANDY**, *Associate Professor of Communicative Disorders* (August 1990) A.B., Heidelberg College; M.S., University of Pittsburgh; Ph.D., University of Oklahoma, 1969.
- MINEL J. BRAUN**, *Professor of Mechanical Engineering* (1978) M.S., Ph.D., Carnegie-Mellon University, 1978.
- JAMES L. BRECHBILL**, *Associate Professor of Electronic Technology* (1986) B.S.E.E., The University of Akron; B.S.E., Kent State University; M.S.T., The University of Akron, 1988.
- MERLIN G. BRINER**, *Professor of Law* (1970) B.S.B.A., Wichita State University; J.D., The University of Akron, 1966.
- DAVID R. BRINK**, *Associate Professor of Bibliography; Business Bibliographer* (December 1976) B.A., Wabash College; B.D., University of Chicago; M.A., University of Minnesota; M.B.A., The University of Akron, 1983.
- WILLIAM J. BRITTAIN**, *Associate Professor of Polymer Science* (August 1990) B.S., University of Northern Colorado; Ph.D., California Institute of Technology, 1982.
- STEPHEN C. BROOKS**, *Associate Director of the Ray C. Bliss Institute; Associate Professor of Political Science* (1982) B.A., Colorado College; M.A., Ph.D., Northwestern University, 1982.
- BRENDA J. BROWN**, *Grant and Contract Accountant* (March 1986) B.S., The University of Akron, 1990.
- DENISE M. BROWN**, *Budget Analyst* (October 1984) A.A.S., B.S., The University of Akron, 1993.
- DOUGLAS T. BROWN**, *Assistant Director of Admissions for Events* (May 1995) B.A., M.A., Ohio University, 1993.
- DIANNE BROWN-WRIGHT**, *Assistant Professor of Education* (1991) B.A., M.S., Ph.D., Florida State University, 1984.
- STANLEY R. BRUNS**, *Associate Professor in the Community and Technical College* (1970) B.S., Fort Hays Kansas State College; M.A., Central Michigan University, 1970.
- KEITH L. BRYANT, JR.**, *Professor of History* (August 1988) B.S., M.Ed., University of Oklahoma; Ph.D., University of Missouri, 1965.
- BARBARA A. BUCEY**, *Academic Adviser* (July 1983) B.A., M.A.Ed., The University of Akron, 1983.
- CHERYL L. BUCHANAN**, *Assistant Professor of Nursing* (1977) B.S.N., M.S.N., University of Cincinnati, 1977; RN.
- JAMES H. BUCHANAN**, *Associate Professor of Philosophy* (1971) B.A., M.A., Ohio University; Ph.D., Pennsylvania State University, 1970.
- DAVID C. BUCHTHAL**, *Professor of Mathematical Sciences; Department Chair of Mathematical Sciences* (1971) B.S., Loyola University; M.S., Ph.D., Purdue University, 1971.
- DAN LEE BUJIE**, *Assistant Vice President for Advising and Counseling Services* (July 1968) B.S., M.S., The University of Akron, 1968.
- JULIA R. BURDGE**, *Assistant Professor of Chemistry* (1994) B.A., M.S., University of South Florida; Ph.D., University of Idaho, 1994.
- GREGORY S. BURKE**, *Director of Development-Intercollegiate Athletics/Marketing* (February 1992) B.A., Mount Union College; M.S., Kent State University, 1986.
- JERRY J. BURR**, *Professor of Dance* (1975) Cleveland College; studied with Robert Joffrey of New York, Dudley De Vos of London, Michele de Lutky and William Millie of Munich.
- CHARLOTTE L. BURRELL**, *Assistant Director of Student Financial Aid* (June 1987) B.S., M.Ed., Kent State University, 1986.
- TERRY F. BUSS**, *Professor of Public Administration and Urban Studies; Department Chair of Public Administration and Urban Studies* (1987) B.A., M.A., Ph.D., The Ohio State University, 1976.
- DENNIS M. BYRNE**, *Professor of Economics* (1975) B.S., Villanova University; M.A., Ph.D., University of Notre Dame, 1975.
- ALLEN MANUEL CABRAL**, *Associate Professor of Accounting* (1972) B.S.B.A., American International College; M.S., Kent State University; J.D., The University of Akron; L.L.M., Cleveland State University, 1985; C.P.A., Ohio.
- SEAN CAI**, *Assistant Professor of Physical and Health Education* (1995) B.S., Southwest China Normal University; M.Ed., Shanghai Institute of Physical Education; Ph.D., University of Arkansas, 1995.
- KYONSUKU MIN-CAKMAK**, *Associate Professor of Polymer Engineering* (August 1983) B.Eng., M.Eng., Kyoto Institute of Technology; Ph.D., University of Tennessee, 1984.
- MUKERREM CAKMAK**, *Professor of Polymer Engineering* (August 1983) B.S., Technical University of Istanbul; M.S., Ph.D., University of Tennessee, 1984.
- ANDRIENNE C. CALDERON**, *Director of College of Business Administration-Administrative Services* (August 1988) B.S., University of the West Indies; M.S., Virginia Polytechnic Institute and State University, 1986.
- THOMAS G. CALDERON**, *Associate Professor of Accounting* (1988) B.S., M.S., University of the West Indies; Ph.D., Virginia Polytechnic Institute and State University, 1987.
- KIM C. CALVO**, *Professor of Chemistry* (1984) B.A., Ph.D., The Ohio State University, 1981.
- DOUGLAS E. CAMERON**, *Professor of Mathematical Sciences* (1969) B.A., Miami University; M.S., The University of Akron; Ph.D., Virginia Polytechnic Institute and State University, 1970.
- JANIS M. CAMPBELL**, *Associate Professor of Nursing* (August 1988) B.S.N., M.S.N., Ph.D., The Ohio State University, 1978.
- MICHELE L. CAMPBELL**, *Coordinator of Fraternity and Sorority Life* (March 1993) B.S., Ashland College; M.Ed., Kent State University, 1993.
- FRANCIS E. CANDA**, *Assistant Professor of Finance* (August 1989) B.A., John Carroll University; M.B.A., Kent State University; Ph.D., The Ohio State University, 1991.
- CHARLES S. CANDEA**, *Associate Director of Purchasing* (January 1988) B.S., Ohio University, 1959.
- ROSEMARY CANNON**, *Budget Assistant to the Dean in the College of Nursing* (October 1990) B.A., The University of Akron, 1972.
- RICHARD E. CAPLAN**, *Associate Professor of Communication* (1980) B.A., Michigan State University; M.A., Ph.D., Wayne State University, 1975.
- RUTH E. CARLSON**, *Instructor in Nursing* (August 1990) B.S.N., M.S.N., Kent State University, 1990.
- FRED M. CARR**, *Assistant Professor of Education; Director of the Center for Economic Education*; (October 1979) B.A., Westminster College; M.Ed., Ed.S., Ph.D., University of Florida, 1977.
- J. DEAN CARRO**, *Coordinator of the Legal Clinic Offices; Staff Attorney; Associate Professor of Clinical Law* (November 1978) B.A., State University of New York at New Paltz; J.D., The University of Akron, 1978.
- EUGENIA CARROLL**, *Adjunct Assistant Professor of Dance; Director of the Dance Institute* (1977) Odontological Institute of Munich, 1949.
- JEANETTE M. CARSON**, *Supervisor of Classroom Services* (April 1985) B.A., M.S., The University of Akron, 1990.
- CAROL A. CARTER**, *Academic Adviser* (January 1987) B.S.Ed., Otterbein College; M.S.Ed., The University of Akron, 1984.
- CHARLES H. CARTER**, *Professor of Geology* (1982) B.S., Portland State University; M.S., San Jose State University; Ph.D., Johns Hopkins University, 1972.
- LINDA L. CASALE**, *Assistant to the Dean of the School of Law* (July 1993) B.A., University of Michigan, 1962.
- DANA F. CASTLE**, *Professor of Law* (March 1974) B.S., Cornell University; J.D., The University of Akron, 1973.
- JOSEPH F. CECCIO**, *Professor of English* (1978) B.A., Loyola College; M.A., Ph.D., University of Illinois at Urbana, 1975.

- CHIEN-CHUNG CHAN**, Associate Professor of Mathematical Sciences; Associate Professor of Mechanical Engineering (1989) M.S., Ph.D., University of Kansas, 1989.
- TOMASITA M. CHANDLER**, Professor of Home Economics and Family Ecology (1971) B.A., New Mexico Highlands University; M.S., Ph.D., Texas Women's University, 1970.
- WEI JEN CHANG**, Instructor in Biology (1970) B.S., National Taiwan University; M.S., University of Toronto, 1961.
- MARDY R. CHAPLIN**, Director of Physical Facilities-Administration (May 1989) B.A., Malone College; M.P.A., The Ohio State University, 1983.
- ANTHONY CHARLEY, JR.**, Instructor in Allied Health Technology (1990) A.A.S., B.S., The University of Akron, 1987.
- GEORGE G. CHASE**, Associate Professor of Chemical Engineering (1983) B.S., Ph.D., The University of Akron, 1989.
- CHIOU S. CHEN**, Professor of Electrical Engineering; (1968) B.S.E.E., National Taiwan University; M.S.E.E., Ph.D., University of Rochester, 1967; P.E., Ohio.
- HUEY-TSYH CHEN**, Associate Professor of Sociology; Associate Professor of Public Administration and Urban Studies (1984) B.A., Chung-Hsing University; M.A., National Taiwan University; Ph.D., University of Massachusetts, 1981.
- STEPHEN Z. D. CHENG**, Professor of Polymer Science (July 1987) B.S., East China Normal University; M.S., East China Institute of Science and Technology; Ph.D. Rensselaer Polytechnic Institute, 1985.
- HARRY M. CHEUNG**, Associate Professor of Chemical Engineering (1984) B.S., M.S., Ph.D., Case Western Reserve University, 1985.
- MARIAN S. CHILDS**, Administrative Project Leader (January 1978) B.S., The University of Akron, 1964.
- GERALDINE F. CHITTY**, University Registrar (October 1967) B.A.Ed., M.S.Tech.Ed., The University of Akron, 1982.
- DIANA A. CHLEBEK**, Fine Arts, Language, and Literature Bibliographer; Associate Professor of Bibliography (November 1987) B.A., M.A., University of Toronto; M.A., University of Chicago; M.A., Ph.D., Cornell University, 1984.
- JOHN CHOPKA**, Associate Director of Admissions for Outreach (May 1995) B.A., Malone College, 1989.
- FRED KAT-CHUNG CHOY**, Professor of Mechanical Engineering (1983) B.S.C.E., National Taiwan University; M.S.C.E., Ph.D., University of Virginia, 1977; P.E.
- CRAIG M. CHRISTENSEN**, Instructor in Marketing (1991) B.S., University of Illinois; Ph.D., Cornell University, 1961.
- ALICE E. CHRISTIE**, Associate Professor of Education (1980) B.A., Ursuline College; M.A., The University of Akron; Ph.D., Kent State University, 1982.
- HARRY T. CHU**, Professor of Physics; Professor of Chemistry (1969) B.S., Chikung University; M.A., Ph.D., State University of New York at Stony Brook, 1969.
- MAMERTO L. CHU, JR.**, Professor of Mechanical Engineering; Professor of Biomedical Engineering (1968) B.S.M.E., Iloilo City University (Philippines); M.S.M.E., Ph.D., University of Houston, 1967; P.E., Ohio.
- STEVEN S. CHUANG**, Associate Professor of Chemical Engineering (1986) M.S., New Jersey Institute of Technology; Ph.D., University of Pittsburgh, 1985.
- BENJAMIN T. F. CHUNG**, Professor of Mechanical Engineering; Department Chair of Mechanical Engineering; F. Theodore Harrington Professor of Mechanical Engineering (December 1969) B.S.M.E., Taiwan Provincial Cheng-Kung University; M.S.M.E., Kansas State University; M.S.Math, University of Wisconsin; Ph.D., Kansas State University, 1968.
- LINDGREN L. CHYI**, Professor of Geology (1978) B.Sc., National Taiwan University; M.Sc., Ph.D., McMaster University, 1972.
- HOLLY C. CLARK**, Coordinator of Transfer Admissions (July 1981) B.A., M.Ed., Cleveland State University, 1972.
- NORRIS B. CLARK, III**, Associate Professor of English (1987) B.A., Colgate University; M.L.S., Wesleyan University; Ph.D., Cornell University, 1980.
- EDWARD N. CLARKE**, Assistant Director of the College of Business Administration Undergraduate Programs (1974) B.S.Ed., Kent State University; M.S.Ed., The University of Akron, 1966.
- BARBARA E. CLEMENTS**, Professor of History (1971) B.A., University of Richmond; M.A., Ph.D., Duke University, 1971.
- HELEN K. CLEMINSHAW**, Professor of Home Economics and Family Ecology; Director of Center for Family Studies (1977) B.S., Rutgers; M.A., Ph.D., Kent State University, 1977.
- CURTIS B. CLEMONS**, Assistant Professor of Mathematical Sciences (August 1990) B.S., Ashland College; M.A., Miami University; Ph.D., University of Maryland at College Park, 1990.
- RUTH E. CLINEFELTER**, Professor of Bibliography; Social Sciences/Humanities Bibliographer (June 1952) B.A., M.A., The University of Akron; M.A.L.S., Kent State University, 1956.
- CYNTHIA L. COCCARO**, Assistant Professor of Bibliography (October 1994) B.A., Ursuline College; M.L.S., Kent State University, 1994.
- RICHARD C. COHEN**, Associate Professor of Law; Director of the Legal Writing Program (July 1983) B.A., Emory University; J.D., University of Connecticut, 1975.
- JOHN R. COLE**, Associate Professor of Office Administration (1976) B.S., M.A., University of Pittsburgh; Ph.D., Kent State University, 1976.
- MALINA COLEMAN**, Assistant Professor of Law (August 1989) B.S., Central State University; J.D., Yale University, 1985.
- JO ANN H. COLLIER**, Associate Professor of Nursing (1974) B.S., Loretto Heights College; M.S., University of Colorado; Ph.D., The University of Akron, 1987; R.N.
- SUSAN G. COLVILLE-HALL**, Associate Professor of Education (1989) B.S., M.A., Ph.D., The Ohio State University, 1983.
- THOMAS R. CONNELL**, Professor of Electronic Technology (January 1980) B.S., Purdue University; M.S., The University of Akron, 1965.
- EDWARD J. CONRAD**, Assistant Professor of Accounting (1991) B.S., The University of Akron; Ph.D., Florida State University, 1991.
- MARTHA A. CONRAD**, Family Health Nurse Specialist; Assistant Director of the Center for Nursing (1984) B.S.N., The Ohio State University; M.S.N., The University of Akron, 1982.
- TED A. CONWAY**, Assistant Professor of Mechanical Engineering; Assistant Professor of Biomedical Engineering (August 1991) B.S., Florida State University; M.S., Ph.D., University of Illinois, 1991.
- DALE E. COONS**, Professor of Education (1973) B.S.Ed., Butler University; M.S.Ed., Ph.D., Indiana University at Bloomington, 1970.
- FRANK J. COSTA**, Professor of Urban Studies; Professor of Geography and Planning; Center Associate, Center for Urban Studies (1972) B.A., Kent State University; M.S., Case Western Reserve University; Ph.D., University of Wisconsin at Madison, 1974.
- G. JEAN COWSER**, Academic Adviser (January 1987) B.S., Wilberforce University; M.Ed., Kent State University, 1972.
- SANDRA C. COYNER**, Assistant to the Dean in the College of Education (June 1994) A.A., Cuyahoga Community College; B.A., Cleveland State University; M.B.A., Baldwin-Wallace College; M.Ed., Ed.D., The University of Akron, 1992.
- ROGER B. CREEL**, Associate Dean of Buchtel College of Arts and Sciences; Professor of Physics; Professor of Chemistry (1970) B.A., Kalamazoo College; Ph.D., Iowa State University, 1969.
- JAMES L. CRESS**, Associate Professor of Accounting (1973) B.S.B.A., M.B.A., Bowling Green State University; D.B.A., Kent State University, 1979; CPA, Ohio.
- JAMES R. CROWE**, Slide Librarian (July 1988) B.F.A., Youngstown State University; M.A., Cleveland State University; M.L.S., Kent State University, 1992.
- COLLEEN CURRY**, Director of Minority Student Support Programs (July 1990) B.A. Temple University; M.A., The University of Akron, 1991.
- TERESA J. CUTRIGHT**, Assistant Professor of Civil Engineering (1994) B.S., M.S., Ph.D., The University of Akron, 1994.
- MICHAEL F. d'AMICO**, Professor of Marketing (1972) B.S., Georgetown University; M.B.A., Rutgers University; D.B.A., Texas Technical University, 1975.
- DANIEL L. DAHL**, Executive Director of the Performing Arts Hall (February 1991) B.B.A., University of Wisconsin at Whitewater; M.A., University of Wisconsin at Madison, 1987.
- GEORGE DANHIRES**, Associate Professor of Art (January 1983) B.F.A., M.F.A., Ohio University, 1974.
- ISIAH DANIELS, III**, Associate General Counsel; Contract Compliance Officer (December 1982) B.A., J.D., The University of Akron, 1976.
- SUSAN J. DANIELS**, Professor of Education (1977) B.A., Marian College; M.A., Ph.D., Ball State University, 1977.
- GORDON H. DANIELSON**, Electrical Engineer; Adjunct Design Professor of Electrical Engineering (1987) B.S., Michigan State University; M.S., Ph.D., Syracuse University, 1969.
- HELEN C. DANNEMILLER**, Instructor in Nursing (1988) B.S.N., M.S.N., The University of Akron, 1987.
- STEPHEN DARLING**, Professor of Chemistry (1970) B.S., University of Wisconsin at Madison; M.A., Ph.D., Columbia University, 1959.
- RALPH FRANK DARR, JR.**, Professor of Education (1968) B.S.Ed., Southeast Missouri College; M.A.Ed., Washington University; Ph.D., Southern Illinois University at Carbondale, 1967.
- PATRICK A. DARRAH**, Associate Director of Placement Services (August 1976) A.A.S., B.S., M.S., The University of Akron, 1976.
- PAUL A. DAUM**, Associate Professor of Theatre Arts (1965) B.F.A., Wesleyan College; M.A., The University of Akron; Ph.D., The Ohio State University, 1973.
- ROBERT M. DAVEY**, Assistant Professor of Mathematics (Wayne College) (1991) A.A., Long Beach City College; B.A., M.A., University of California-Los Angeles; Ph.D., University of Arizona, 1988.
- HARRY L. DAVIDSON**, Associate Professor of Music; Director of Orchestras (1994) B.A., Case Western Reserve University; M.M., Pacific Lutheran University, 1983.
- BRIAN E. DAVIS**, Director of Resource Analysis and Budgeting; Assistant to the Vice President for Administrative Support Services (January 1985) B.S., M.S., The University of Akron, 1991.
- KATHLEEN M. DAVIS**, Assistant Professor of Dance (1977) B.A., M.S., The University of Akron, 1986.
- RUSSELL K. DAVIS, III**, Associate Professor of Business Management Technology (1971) B.S.B.A., M.A., Wayne State University; Ed.D., The University of Akron, 1978.
- REBECCA A. DAWSON**, Assistant Professor of Music (1993) B.M.E., Baylor University; M.A., West Texas State University, 1984.
- JOSE ALEXIS De ABREU-GARCIA**, Associate Professor of Electrical Engineering (1987) B.Sc., Ph.D., Queen's University at Kingston, 1986.
- DEBRA L. DEANE**, Instructor in the English Language Institute (1981) B.A., Albion College; M.A., University of Michigan, 1977.
- DAVID A. DECKARD**, Assistant Professor of Military Science (July 1993) B.A., The University of Akron; Command and General Staff College, 1989; Major, U.S. Army.
- DANIEL C. DECKLER**, Assistant Professor of Engineering and Mathematics (Wayne College) (1991) B.S., Ohio Northern University; M.S., The University of Akron, 1990.
- MARY H. K. DEE**, Professor of Office Administration (1970) B.S.S.A., University of the East (Manila); M.A., Central Missouri State University; Ph.D., The University of Akron, 1992.
- JOSEFINA P. de los REYES**, Assistant Professor of Mathematical Sciences (1985) B.S., M.S., University of the Philippines; M.S., Cleveland State University; Ph.D., Case Western Reserve University, 1985.
- HOWARD A. DENEMARK**, Associate Professor of Law (August 1991) B.S.B.A., Washington University; J.D., University of Wisconsin, 1984.
- PARIZAD T. DEJBORD-SAWAN**, Assistant Professor of Modern Languages (1980) B.S., M.A., The University of Akron, 1983.
- CHRISTINA A. DePAUL**, Associate Professor of Art; Director of the School of Art; Ad Hoc Director of External Relations (1986) B.F.A., Carnegie-Mellon University; M.F.A., Temple University, 1984.
- ROBERTA A. DePOMPEI**, Professor of Communicative Disorders; Clinical Supervisor in Communicative Disorders (January 1983) B.S.Ed., M.A., Kent State University; Ph.D., The University of Akron, 1991.
- HASHEM DEZHBAKHSH**, Associate Professor of Economics (1987) B.S., Pahlavi University; M.A., The University of Akron; Ph.D., The Ohio State University, 1989.
- ROBERT L. DIAL**, Associate Professor of English (1965) B.S., Central Missouri State College; M.A., Ph.D., University of Missouri at Kansas City, 1963.
- JOETTE DIGNAN WEIR**, Editor, University Communications (January 1991) B.S., Bowling Green State University, 1975.
- JEFFREY C. DILTS**, Associate Professor of Marketing; Director of Small Business Institute (1983) B.A., University of Missouri at Columbia; M.A., Northwest Missouri State University; Ph.D., Oklahoma State University, 1983.

- RICHARD J. DIRIENZO**, *Professor of Surveying and Construction Technology* (1981) B.S.C.E., Youngstown State University; M.S., University of Missouri, 1968.
- GEORGE L. DISABATO**, *Professor of Commercial Art* (1981) B.F.A., The Ohio State University; M.A., University of Louisville, 1964.
- JAMES J. DIVOKY**, *Associate Professor of Management* (1983) B.B.A., M.B.A., D.B.A., Kent State University, 1984.
- FRANCOIS K. DOAMEKPOR**, *Assistant Professor of Public Administration and Urban Studies* (1991) B.A., University of Cape Coast of Ghana; M.B.A., Ball State University; Ph.D., University of Pittsburgh, 1989.
- DOROTHY M. DOBRINDT**, *Associate Professor of Nursing; Coordinator of Sophomore Year* (1969) B.S., St. Louis University; M.Ed., Columbia University; 1965; R.N.
- JOHN L. DONALDSON**, *Associate Professor of Mathematical Sciences* (January 1983) B.S., Case Western Reserve University; M.S., Ph.D., M.S., The Ohio State University, 1977.
- BRIAN J. DONOHER**, *Assistant Men's Basketball Coach* (April 1995) B.S., University of Dayton, 1992.
- DENNIS DOVERSPIKE**, *Associate Professor of Psychology* (1984) B.S., John Carroll University; M.S., University of Wisconsin at Oshkosh; Ph.D., The University of Akron, 1983.
- THERESA M. DOWD**, *Assistant Professor of Nursing* (1994) B.S.N., St. Louis University; M.S., University of Minneapolis at St. Paul; Ph.D., Wayne State University, 1994.
- BRETT A. DRAPER**, *Assistant Athletic Trainer* (November 1993) B.S., Ball State University; M.Ed., University of Cincinnati, 1990.
- RICHARD A. DRAPER**, *Data Base Administrator* (February 1986) B.A., Otterbein College, 1977.
- CLARENCE B. DRENNON**, *Associate Professor of Civil Engineering* (1975) B.S., Colorado School of Mines; M.E., Texas A&M; Ph.D., Iowa State University, 1972; P.E., Ohio, Virginia.
- JERRY E. DRUMMOND**, *Associate Professor of Mechanical Engineering* (1981) B.S.M.E., General Motors Institute; M.S.M.E., The University of Akron; Ph.D., The Ohio State University, 1981; P.E., Ohio.
- ROBERT A. DUBICK**, *Associate Professor of Education* (1985) B.A., St. Mary's; M.A., Ph.D., University of Notre Dame, 1973.
- KATHY D. DuBOSE**, *Academic Project Leader* (October 1984) B.S., M.B.A., The University of Akron, 1989.
- HOWARD M. DuCHARME, JR.**, *Associate Professor of Philosophy* (1986) B.A., Hope College; M.A., Trinity Divinity School; Ph.D., Oxford University, 1984.
- TIMOTHY R. DuFORE**, *Associate Vice President for Research and University Development-Development; Executive Director of The University of Akron Foundation* (February 1984) B.A., Westminster College; M.A., Bowling Green State University, 1977.
- JOHN THOMAS DUKES**, *Associate Professor of English* (1984) B.A., M.A., University of Texas at El Paso; Ph.D., Purdue University, 1984.
- JANNE R. DUNHAM-TAYLOR**, *Associate Professor of Nursing* (January 1985) B.S., Michigan State University; M.S., Ph.D., University of Michigan, 1982; R.N.
- JOSEPH J. DUNN**, *Director of Sports Marketing/Promotions* (March 1976) B.S., Kent State University, 1974.
- KENNETH A. DUNNING**, *Professor of Management and Computer Information Systems* (1973) B.S.E.E., North Carolina State University at Raleigh; M.B.A., Ph.D., University of Pittsburgh, 1972.
- ROGER W. DURBIN**, *Associate Professor of Bibliography; Associate Dean of University Libraries* (January 1978) B.A., M.A., Youngstown State University; M.L.S., Ph.D., Kent State University, 1985.
- JOHN DURKIN**, *Associate Professor of Electrical Engineering* (1987) A.E.T., B.S.E.E., Pennsylvania State University; M.S.E.E., Ph.D.E.E., University of Pittsburgh, 1983.
- DAVID R. DURST**, *Professor of Finance* (1968) B.S.B.A., Kent State University; M.B.A., D.B.A., Georgia State University, 1972.
- ASHOK K. DUTT**, *Professor of Geography and Planning; Professor of Urban Studies* (1968) B.A., M.A., M.A., Ph.D., Patna University (India), 1961.
- CHARLES MYRON DYE**, *Interim Dean of Graduate School; Professor of Education* (1972) B.A., Harris Teachers College; M.A., Ph.D., Washington University, 1971.
- LYLE DYE, JR.**, *Professor of Theatre Arts; Professor of Music* (1981) B.F.A., Drake University; M.F.A., Yale University, 1958.
- PAUL A. EASTERLING**, *Office and Computer Administration* (October 1991) B.A., The University of Akron, 1991.
- RONALD K. EBY, SR.**, *Robert C. Musson Professor of Polymer Science* (July 1990) Sc.B., Lafayette College; M.S., Ph.D., Brown University, 1958.
- JOHN W. EDGERTON**, *Associate Professor of Electronic Technology* (January 1984) B.S., Cornell University; M.S., Purdue University, 1972.
- PATRICIA L. EDWARDS**, *Assistant Professor of Education* (1989) B.A., Antioch College; M.Ed., Bowling Green State University; Ph.D., Kent State University, 1988.
- SANDRA B. EDWARDS**, *Coordinator of the Adult Resource Center; Associate Director of Admissions* (October 1977) B.A., M.A., The University of Akron, 1968.
- JAMES J. EGAN**, *Professor of English* (1971) B.A., St. Joseph's College; M.A., Ph.D., University of Notre Dame, 1971.
- THOMAS A. EIDSON**, *Assistant Professor of Physical Education* (1990) B.S., Kent State University; M.A., The Ohio State University; Ph.D., Kent State University, 1985.
- RICHARD L. EINSPOHN**, *Assistant Professor of Mathematical Sciences* (1987) B.S., Indiana University of Pennsylvania; M.A., M.A., The Pennsylvania State University; Ph.D., Virginia Polytechnic Institute, 1987.
- MALIK E. ELBULUK**, *Associate Professor of Electrical Engineering* (1989) B.Sc., University of Khartoum; M.S.E.E., D.Sc., Massachusetts Institute of Technology, 1986.
- JANICE L. ELEY**, *Professor of Hospitality Management* (1976) B.A., Manchester College; M.A., Indiana University, 1974.
- ROBERT K. ELEY**, *Associate Professor of Education; Director of Student Services* (1975) B.S.Ed., M.S.Ed., Ball State University, Ed.D., Indiana University, 1975.
- J. RICHARD ELLIOTT, JR.**, *Associate Professor of Chemical Engineering* (January 1986) B.S., Christopher Newport College; M.S., Virginia Polytechnic Institute and State University; Ph.D., Pennsylvania State University, 1985.
- MICHELLE ELLIS**, *Assistant Director of Student Financial Aid* (November 1983) A.A., B.S., M.A., The University of Akron, 1992.
- CHERYL ELMAN**, *Assistant Professor of Sociology* (1995) A.A.S., State University of New York; B.A., Syracuse University; M.A., Ph.D., University of North Carolina at Chapel Hill, 1993.
- DANIEL L. ELY**, *Professor of Biology; Professor of Biomedical Engineering; Interim Director of the Center for Biomedical Research and Education* (1976) B.A., M.S., Ph.D., University of Southern California, 1971.
- SANDRA M. EMERICK**, *Assistant Dean of Students* (July 1989) B.S., M.S.Ed., The University of Akron, 1989.
- JAMES R. EMORE**, *Associate Professor of Accounting* (1973) B.A.Ed., M.S.Acct., The University of Akron; D.B.A., Kent State University, 1984.
- KATHLEEN L. ENDRES**, *Professor of Communication* (1987) B.A., M.A., University of Maryland; Ph.D., Kent State University, 1985.
- ELIZABETH B. ERICKSON**, *Associate Professor of Economics* (1969) B.S., M.S., University of Western Australia; Ph.D., University of Illinois, 1972.
- REBECCA J. ERICKSON**, *Assistant Professor of Sociology* (1991) B.A., Indiana University; M.A., Ph.D., Washington State University, 1991.
- EARL L. ERTMAN**, *Professor of Art* (1967) B.S., University of Southern Mississippi; M.A., Case Western Reserve University, 1967.
- WALTER L. EVEGE, JR.**, *Assistant Director of Affirmative Action/Equal Employment Opportunity* (July 1988) B.S., Tougaloo College, 1964.
- THOMAS L. FAESELL**, *Associate Director of Residence Halls* (November 1983) B.A., Bowling Green State University; M.A., Ball State University, 1978.
- R. FRANK FALK**, *Professor of Sociology* (1988) A.A., Oakland City College; B.A., M.A., San Francisco State University; Ph.D., University of Minnesota, 1969.
- J. CLAYTON FANT**, *Associate Professor of Classics; Associate Professor of History* (1984) B.A., Williams College; Ph.D., University of Michigan, 1976.
- GERALDINE FARIA**, *Associate Professor of Social Work* (1987) B.A., Rhode Island College; M.S.W., University of Connecticut; Ph.D., University of Denver, 1980.
- GERARD A. FAUST, JR.**, *Assistant Vice President for University Development* (December 1985) B.S.Ed., University of Dayton; M.Ed., Xavier University, 1965.
- MARVIN D. FEIT**, *Professor of Social Work; Director of the School of Social Work* (1989) B.S., Brooklyn College; M.S., Columbia University; M.Sci., Ph.D., University of Pittsburgh, 1976.
- KATHRYN M. FELTEY**, *Associate Professor of Sociology* (January 1988) B.A., M.A., Wright State University; Ph.D., The Ohio State University, 1988.
- RUDY FENWICK**, *Associate Professor of Sociology* (1978) B.A., University of Oklahoma; M.A., McGill University; Ph.D., Duke University, 1978.
- DEMETER G. FERTIS**, *Professor of Civil Engineering* (1966) B.S., M.S., Michigan State University; Ph.D., Eng., National Technical University (Athens, Greece), 1964.
- CAROL A. FICKEN**, *Head of Accounting/Receiving and Order Unit* (1985) B.S., The University of Akron, 1991.
- ROBERT A. FIGLER**, *Associate Professor of Management* (1985) B.A., Indiana University of Pennsylvania; M.A., Ph.D., West Virginia University, 1984.
- LAURI S. FILE**, *Director of Admissions and Financial Assistance for School of Law* (November 1983) B.A., The University of Akron, 1993.
- ELAINE M. FISHER**, *Instructor in Nursing* (1986) B.S.N., The University of Akron; M.S.N., Kent State University, 1985.
- VIRGINIA L. FITCH**, *Professor of Social Work* (1981) B.S., East Tennessee State University; M.S.W., University of Hawaii; Ph.D., Case Western Reserve University, 1982.
- JUDITH L. FITZGERALD**, *Assistant Professor of Bibliography; Cataloger* (July 1969) B.A., West Virginia Wesleyan University; M.S.L.S., Case Western Reserve University, 1976.
- PHYLLIS A. FITZGERALD**, *Associate Professor of Nursing; Assistant Dean for Student Affairs, Nursing* (November 1982) B.S.N., Saint Louis University; M.A.N., New York University; Ph.D., University of Arizona, 1982.
- VIRGINIA J. FLEMING**, *Professor of Home Economics and Family Ecology; Director of the School of Home Economics and Family Ecology* (1969) B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University; Ph.D., Kent State University, 1983.
- CAROL A. FLEXER**, *Professor of Communicative Disorders* (1982) B.A., Metropolitan State College; M.A., University of Denver; Ph.D., Kent State University, 1982.
- LAWRENCE G. FOCHT**, *Associate Professor of Chemical Engineering* (1968) B.S.Ch.E., University of Iowa; M.S.Ch.E., Ph.D., Louisiana State University, 1969; P.E., Ohio.
- ANNABELLE M. FOOS**, *Associate Professor of Geology; Interim Director of Environmental Studies* (1984) B.A., State University of New York at Potsdam; Ph.D., University of Texas at Dallas, 1984.
- SCOTT J. FORBES**, *Assistant Professor of Mechanical Engineering* (January 1990) B.S.C.E., Purdue University; M.S.A.E., Ph.D., University of Minnesota, 1989.
- BRIDGIE A. FORD**, *Professor of Education* (1987) B.S., M.S., Eastern Illinois University, Ph.D., Purdue University, 1983.
- ANTONIA M. FORSTER**, *Associate Professor of English* (1986) B.A., M.A., Flinders University; Ph.D., University of Melbourne, 1986.
- HAROLD M. FOSTER**, *Professor of Education* (1976) B.A., Indiana University of Pennsylvania; M.A., University of Pittsburgh; Ph.D., University of Michigan, 1976.
- MARK D. FOSTER**, *Associate Professor of Polymer Science* (November 1990) B.S., Washington University; Ph.D., University of Minnesota at Minneapolis, 1987.
- THALIA D. FOUNTAIN**, *Academic Adviser* (February 1990) A.A., Lorain County Community College; B.A., The University of Akron; M.A., Bowling Green State University, 1989.
- SHAANETTE M. FOWLER**, *Coordinator of Placement Services* (March 1982) B.A., Mount Union College; M.A., The University of Akron, 1991.
- MICHAEL S. FOX**, *Senior Military Science Instructor; Master Sergeant* (May 1994).
- JAMES D. FRAMPTON**, *Associate Professor of Drafting and Computer Drafting Technology* (1989) B.S., M.A., The Ohio State University, 1988.
- RICHARD J. FRANCHAK**, *Assistant Athletic Director; Compliance Officer* (August 1994) B.A., University of Maryland at Baltimore, 1986.
- WILLIAM A. FRANCIS**, *Associate Dean of Buchtel College of Arts and Sciences; Professor of English* (1966) B.A., M.A., Duquesne University; Ph.D., Case Western Reserve University, 1975.
- GARY B. FRANK**, *Professor of Accounting* (January 1985) B.A., University of Minnesota; M.A., Ph.D., M.A.S., University of Illinois, 1984; C.P.A., C.M.A.

- RICHARD K. FRANKLIN**, Associate Professor of Political Science (1970) B.A., Bryan College; M.A., Michigan State University; Ph.D., University of Kentucky, 1976.
- JOHN E. FREDERICK**, Associate Professor of Chemistry; Associate Professor of Polymer Science (October 1966) B.S., Glenville State College; Ph.D., University of Wisconsin, 1964.
- LAVERNE M. FRIBERG**, Associate Professor of Geology (March 1976) B.S., University of Wisconsin; M.A., Ph.D., Indiana University at Bloomington, 1976.
- DAVID A. FRISONE**, Assistant Professor of Military Science (1994) Captain, Infantry, U.S. Army.
- ROBERT L. FRITZ, JR.**, Assistant Director of Gardner Student Center (June 1976) B.S., The University of Akron, 1976.
- JOHN L. FROLA**, Associate Professor of Biology (1971) B.S., Waynesburg College; M.S., Ph.D., West Virginia University, 1970.
- W. DAVID FROSS**, Head Baseball Coach (July 1988) B.A., Malone College; M.A., The University of Akron, 1982.
- BILL J. FRYE**, Associate Professor of Education; (1971) B.S., M.S., Indiana State University; Ph.D., The Ohio State University, 1971.
- KATHY L. FULLERTON**, Research Assistant Professor of Chemical Engineering; Assistant Director of The Processing Research Center (1989) B.S., M.S., Ph.D., The University of Akron, 1988.
- DONNA GABOURY**, Associate Professor of Home Economics and Family Ecology (1977) B.A., College of Saint Catherine; M.A., Smith College; Ph.D., University of Massachusetts, 1973.
- ROBERT E. GAEBEL**, Associate Professor of Classics; Department Chair of Classics (1970) B.A., M.A., State University of New York at Buffalo; Ph.D., University of Cincinnati, 1968.
- VASSILIOS GALIATSATOS**, Assistant Professor of Polymer Science (October 1990) B.S., The University of Thessaloniki; M.S., Ph.D., University of Cincinnati, 1986.
- THOMAS J. GALLAGHER**, Facilities Project Coordinator (July 1977) B.A., Saint John's University, 1962.
- PATRICK J. GALLAWAY**, Assistant Director of Admissions for Alumni (April 1995) B.A., The University of Akron, 1994.
- CATHY J. GALLOWAY**, Assistant Professor of Nursing; Nurse Practitioner (1994) B.S.N., M.S.N., Case Western Reserve University, 1972.
- NATHAN GAMBLE**, Adviser of Students in the Community and Technical College; Instructor in Manufacturing Technology (July 1995) B.A., The University of Akron, 1966.
- JULIA A. GAMMON**, Associate Professor of Bibliography; Head of Acquisitions Department; Marketing Manager for University of Akron Press (August 1973) B.A., University of Florida; M.S.L.S., University of Pittsburgh, 1967.
- GARY M. GAPPERT**, Director of Institute for Futures Studies and Research; Professor of Public Administration and Urban Studies (June 1980) B.A., Colorado College; Ph.D., Syracuse University, 1972.
- THOMAS NEAL GARLAND**, Professor of Sociology (1969) B.A., M.A., University of North Dakota; Ph.D., Case Western Reserve University, 1971.
- GASPER A. GAROFALO**, Professor of Economics (1979) B.A., St. Vincent College; M.A., Ph.D., University of Pittsburgh, 1974.
- CAROLE J. GARRISON**, Professor of Criminal Justice Technology (1981) B.A., University of Miami; M.P.A., Georgia State University; Ph.D., The Ohio State University, 1979.
- JO ANN GARVER**, Associate Professor of Computer Programming Technology (June 1973) A.A.S., A.A.S., B.S.T.E., M.S.T.E., The University of Akron, 1984.
- BARBARA T. GEISEY**, Director of Learning Resources Center (Wayne College) (August 1986) B.A., University of Oregon; M.A., University of Guam; M.L.S., Kent State University, 1983.
- KIMBERLY A. GENTILE**, Assistant Director of Admissions for Publications/Advertising/Scholarships (May 1995) B.A., The University of Akron, 1991.
- ARTHUR V. GEORGE**, Associate Professor of Transportation (1979) B.B.A., City College of New York; M.B.A., Iona College, 1972.
- THEODORE N. GEORGIADIS**, Research Microscopist (February 1993) B.S., University of Athens; M.S., Harvard University; Ph.D., McGill University (Canada), 1970.
- SUSAN S. GERBERICH**, Instructor in Nursing (1988) B.S.N., The Ohio State University; M.S.N., Case Western Reserve University, 1975.
- CHRISTINE R. GERBIG**, Associate Professor of Office Administration (1979) A.A.S., B.A., The University of Akron; M.Ed., Kent State University, 1982.
- TYRONE GETER**, Associate Professor of Art (1988) B.F.A., M.F.A., Ohio University, 1975.
- GEORGE C. GIAKOS**, Assistant Professor of Biomedical Engineering (1994) B.A., University of Turin; M.S., University of Edinburgh; M.S., Ohio University; Ph.D., Marquette University, 1991.
- REBECCA L. GIBSON**, Instructor in Medical Assisting Technology (1994) B.S., The University of Akron, 1992.
- WILLA E. GIBSON**, Assistant Professor of Law (1995) B.A., Tulane University; J.D., Drake University, 1991.
- CAROL C. GIGLIOTTI**, Professor of Office Administration (1981) A.A.S., Becker Junior College; B.S.Ed., M.S.Ed., Ph.D., The University of Akron, 1994.
- RICHARD J. GIGLIOTTI**, Professor of Sociology; Department Chair of Sociology (1972) B.A., St. John Fisher College; M.A., Ph.D., Michigan State University, 1972.
- DOUGLAS A. GILBERT**, Video Coordinator (August 1993) B.S.B.A., The University of Akron, 1989.
- KRISTINE M. GILL**, Associate Professor of Nursing (1976) B.S.N., St. John College, Cleveland; M.Ed., Cleveland State University; M.S.N., Ph.D., The University of Akron, 1985; R.N.
- YVONNE M. GILLETTE**, Associate Professor of Communicative Disorders (August 1990) B.Ed. University of Toledo; M.A., Ph.D., The Ohio State University, 1990.
- GABRIEL F. GIRALT**, Associate Professor of Communication (1989) B.S., Xavier University, M.F.A., Ohio University, 1989.
- ELTON A. GLASER, II**, Professor of English; Director of the University Press (1972) B.A., M.A., Louisiana State University; M.F.A., University of California at Irvine, 1972.
- THEODORE L. B. GLOECKLER**, Professor of Education; (1972) B.A., Locoming College; M.A., University of Northern Colorado; Ph.D., University of Michigan at Ann Arbor, 1973.
- CAROLYN J. GLOVER**, Assistant Director of Admissions (August 1985) B.S.I.M., The University of Akron, 1982.
- MARK A. GODDARD**, Assistant Professor of Mathematical Sciences (1990) B.S., M.S., Youngstown State University; Ph.D., University of Kentucky, 1990.
- PEARLMARIE W. GODDARD**, International Academic Advisor; International Programs Specialist (December 1981) B.S.Ed., M.Ed., Kent State University; Ed.D., The University of Akron, 1985.
- LATHARDUS GOGGINS**, Associate Dean of the Graduate School; Professor of Geography and Planning (1969) B.A., Central State University; M.A., The Ohio State University; Ph.D., St. John's University; Ed.D., M.S.T.E., The University of Akron, 1984.
- LAWRENCE G. GOLDEN**, Professor of Marketing and Sales Technology (1968) B.S., Case Western Reserve University; M.B.A., University of Pennsylvania, 1968.
- GALE A. GOLEMBESKI**, Associate Professor of Art (1978) B.F.A., Cleveland Institute of Art, 1970.
- MICHAEL R. GOLEMO**, Associate Professor of Music; Assistant Director of University Bands (1984) B.M.E., M.M., Northwestern University, 1983.
- DOREEN M. GOOD**, Instructor in Nursing (1994) B.S.N., Goshen College; M.S.N., The University of Akron, 1994.
- TOM A. GOOSBY**, Director of Recreational and Athletic Facilities (July 1970) B.A., Baldwin-Wallace College; M.A.Ed., The University of Akron, 1978.
- SAMUEL GORDON**, Professor of Music; Director of the School of Music (July 1994) B.S., University of Pennsylvania; M.M., Ph.D., Indiana University, 1972.
- NED T. GOULD**, University Physician; Director of Health Services (1987) B.A., M.D., The Ohio State University, 1948.
- GEORGE R. GRAHAM**, Electronic Systems Coordinator (July 1964) A.A.S., Williamsport Area Community College; B.S., The University of Akron, 1973.
- MICHAEL F. GRAHAM**, Assistant Professor of History (1995) B.A., M.A., Ph.D., University of Virginia, 1993.
- H. ROGER GRANT**, Professor of History (1970) B.A., Simpson College; M.A., Ph.D., University of Missouri at Columbia, 1970.
- NANCY K. GRANT**, Associate Dean of Buchtel College of Arts and Sciences; Associate Professor of Public Administration and Urban Studies (1983) B.A., University of Dallas; M.A., Ph.D., The University of Texas, 1982.
- RICHARD L. GRANT**, Professor of Law (1967) B.S., University of Pennsylvania; J.D., Stanford University; L.L.M., Georgetown University, 1967.
- VELMA RUTH GRAY**, Dean of the College of Nursing; Professor of Nursing (1985) B.S.N., M.S.N., Case Western Reserve University; Ed.D., The University of Akron, 1982.
- JOHN C. GREEN**, Professor of Political Science; Director of the Ray C. Bliss Institute of Applied Politics (1987) B.A., University of Colorado; Ph.D., Cornell University, 1983.
- C. FRANK GRIFFIN**, Professor of Physics (1967) B.S., M.S., Texas Technological College; Ph.D., The Ohio State University, 1964.
- MARY A. GRIMES**, Head Women's Basketball Coach (August 1993) B.S., Ohio University; M.S., University of Pittsburgh, 1988.
- RICHARD J. GROSS**, Associate Professor of Mechanical Engineering (1967) B.S.M.E., University of Pittsburgh; M.S.M.E., Ph.D., Carnegie Institute of Technology, 1967; P.E., Ohio.
- JAMES E. GROVER**, Associate Professor of Electrical Engineering (1979) B.S., Ohio Northern University; M.S., Ph.D., Ohio University, 1981.
- WILLIAM K. GUEGOLD**, Associate Professor of Music (September 1991) B.M., Capital University; M.M., Ph.D., Kent State University, 1989.
- PURUSHOTTAM DAS GUJRATI**, Professor of Physics; Professor of Polymer Science (1983) B.Sc., Banaras Hindu University, India; M.Sc., Indian Institute of Technology, India; M.A., M.Phil., Ph.D., Columbia University, 1978.
- VIRGINIA L. GUNN**, Professor of Home Economics and Family Ecology (1974) B.S., Kansas State University; M.S., Syracuse University; Ph.D., The University of Akron, 1992.
- MING MING GUO**, Manager, NMR Center, Institute of Polymer Science (1994) B.S., M.S., Nanjing University; Ph.D., Fudan University, 1988.
- JO ANN M. GUSTAFSON**, University Auditor (February 1990) B.S.B.A., Kent State University, 1981.
- DEBORAH S. GWIN**, Assistant Director of Student Assistance Center (January 1980) B.M., The University of Akron; M.A., The Ohio State University, 1973.
- JOHN F. GWINN**, Associate Professor of Biology; Chairman of the Division of National Sciences (1970) B.A., Manchester College; M.S., Purdue University; Ph.D., Kent State University, 1972.
- MICHAEL P. HABER**, Professor of Music (1983) B.A., Brandeis University; M.M., Indiana University, 1966.
- MICHEL S. HADDAD**, Instructor in Mechanical Technology (February 1970).
- RICHMAN W. HAIRE**, Associate Professor of Commercial Art (August 1990) B.A., Rochester Institute of Technology; M.F.A., State University of New York at Buffalo, 1970.
- LIONEL D. HAZILIP**, Associate Professor of Mechanical Technology (August 1990) B.S.M.E., Drexel University; M.S.C.E., The University of Akron, 1979.
- ALI HAJJAFAR**, Associate Professor of Mathematical Sciences (1984) B.S., M.S., University for Teacher Education in Tehran, Iran; M.S., Ph.D., Michigan State University, 1984.
- DONALD E. HALL**, Professor of Communicative Disorders (1974) B.S.Ed., Indiana University of Pennsylvania; M.Ed., Westminster College; Ph.D., Ohio University, 1971.
- ROSALE J. HALL**, Assistant Professor of Psychology (1988) B.S., Nebraska Wesleyan University; M.A., Ph.D., University of Maryland, 1988.
- STEPHEN F. HALLAM**, Dean of the College of Business Administration; Professor of Management (July 1995) B.S., M.S., Illinois State University; Ph.D., University of Iowa, 1973.
- GARY R. HAMED**, Professor of Polymer Science (1980) B.S.C.E., M.S.C.E., Cornell University; Ph.D., The University of Akron, 1978.
- JOEL L. HAMPTON**, Director of Auxiliary Services (1990) A.A.S., B.S., M.S., The University of Akron, 1975.
- CHANG D. HAN**, Benjamin Franklin Goodrich Endowed Professor of Polymer Engineering (January 1993) B.S., Seoul National University; M.S., Sc.D., Massachusetts Institute of Technology; M.S., Newark College of Engineering; M.S., New York University, 1971.
- SUSAN C. HANLON**, Associate Professor of Management (January 1990) B.A., Grove City College; M.B.A., Kent State University; D.B.A., Memphis State University, 1989.
- DuWAYNE H. HANSEN**, Associate Dean of Fine and Applied Arts; Professor of Music (July 1967) B.S., University of Wisconsin; M.M., Northwestern University; D.M.E., Indiana University, 1975.
- MARY A. HARCHAR**, Coordinator of the Learning Resources Center (July 1995) B.S., Notre Dame College; B.S.N., Kent State University; M.N., University of Washington, 1981.
- SUSAN I. HARDIN**, Assistant Professor of Psychology (1981) B.A., University of New Mexico; M.A., Ph.D., The Ohio State University, 1973.

- JAMES K. HARDY**, *Professor of Chemistry* (1981) B.S., Cumberland College; Ph.D., Louisiana State University, 1981.
- JAMES T. HARDY**, *Associate Professor of Education* (1991) B.A., Ohio Dominican College; B.A. Saint Charles Borromeo Seminary; M.A., Ph.D., The Ohio State University, 1975.
- SUBRAMANIAM I. HARIHARAN**, *Professor of Mathematical Sciences; Professor of Electrical Engineering* (1985) B.Sc., University of Sri Lanka; M.Sc., University of Salford, England; M.S., Ph.D., Carnegie-Mellon University, 1980.
- VERN R. HARNAPP**, *Professor of Geography and Planning* (1972) B.S.Ed., Concordia Teachers College; M.S.Ed., University of Pennsylvania; Ph.D., University of Kansas, 1972.
- STEPHEN L. HARP**, *Assistant Professor of History* (1993) B.A., Manchester College; M.A., Ph.D., Indiana University, 1993.
- AUGUSTUS L. HARPER**, *Associate Professor of Business Management Technology* (1987) B.B.A., Case Western Reserve University; M.B.A., University of Pennsylvania, 1973; C.P.A., Ohio.
- WILLIAM D. HARPINE**, *Associate Professor of Communication* (1982) A.B., William and Mary College; M.A., Northern Illinois University; Ph.D., University of Illinois, 1982.
- ALISON K. HARRIGAN**, *Instructor in Nursing; Coordinator of Junior Year* (1988) B.S.N., University of Cincinnati; M.S.N., Case Western Reserve University, 1985.
- FRANK W. HARRIS**, *Distinguished Professor of Polymer Science; Director of The Maurice Morton Institute of Polymer Science; Research Associate, Institute of Polymer Science* (1983) B.S., University of Missouri; M.S., Ph.D., University of Iowa, 1968.
- JO ANN HARRIS**, *Associate Professor of Criminal Justice Technology*; (December 1987) B.A., The University of Akron; J.D., John Marshall Law School, 1980.
- HOLLY J. HARRIS-BANE**, *Assistant Director of Ray C. Bliss Institute of Applied Politics* (July 1989) B.A., University of Toledo; M.A., The Ohio State University; M.A., The University of Akron, 1989.
- MONICA L. HARRISON**, *Associate Professor of Mathematics* (Wayne College) (1983) B.A., Walsh College; M.S., University of Notre Dame, 1982.
- TOM T. HARTLEY**, *Professor of Electrical Engineering* (1984) B.A., B.S.E.E., Ohio Northern University; M.S., Ph.D., Vanderbilt University, 1984.
- DONALD E. HARVEY**, *Professor of Art* (1973) B.A., Mankato State College; M.F.A., Temple University, 1971.
- JEFFREY S. HARWELL**, *Graphic Artist/Designer* (November 1985) A.D., B.F.A., The University of Akron, 1984.
- H. JAMES HARWOOD**, *Professor of Chemistry; Professor of Polymer Science* (October 1959) B.S., The University of Akron, Ph.D., Yale University, 1956.
- RICHARD H. HAUDE**, *Associate Professor of Psychology* (1967) A.B., Kenyon College; M.S., Ph.D., University of Pittsburgh, 1964.
- DOUGLAS R. HAUSKNECHT**, *Associate Professor of Marketing* (January 1986) B.S., M.B.A., Ph.D., University of Florida, 1988.
- JON M. HAWES**, *Professor of Marketing; Director of Fisher Institute for Professional Selling* (January 1981) A.S., Vincennes University; B.S., M.B.A., Indiana State University; Ph.D., University of Arkansas, 1981.
- S. WAYNE HAWKINS**, *Business Manager of Wayne College* (Wayne College) (April 1989) B.S., North Carolina Agricultural and Technical State University, 1970.
- DEBRA L. HAYES**, *Assistant Registrar* (1978) B.S., The University of Akron, 1976.
- NANCY L. HAYES**, *Assistant Professor of Bibliography* (October 1994) B.S., The Ohio State University; M.L.S., Kent State University, 1986.
- JESS W. HAYS**, *Director of Transfer and Articulation* (August 1977) B.A., The University of Akron; M.A., Bowling Green State University; M.B.A., The University of Akron, 1985.
- JOHN E. HEBERT**, *Professor of Management* (1980) B.S.E., University of Toledo; M.S.I.E., Ph.D., Purdue University, 1975.
- RONALD F. HEINEKING**, *Chief of University Police* (April 1983) A.A.S., B.S., The University of Akron, 1980.
- BARBARA M. HEINZERLING**, *Professor of Home Economics and Family Ecology* (1973) B.S., M.S., The Ohio State University; J.D., The University of Akron, 1979.
- GLENN K. HEITMAN**, *Assistant Professor of Electrical Engineering* (1989) B.S., University of Toledo; M.S.E., Ph.D., University of Michigan at Ann Arbor, 1989.
- FAITH I. HELMICK**, *Vice President for Administrative Support Services* (February 1989) B.A., Kent State University; M.S.T.E., Ph.D., The University of Akron, 1983.
- M.A. JOHN A. HEMINGER**, *Assistant Professor of Mathematical Sciences* (1984) B.S., University of Cincinnati; M.S., Ph.D., Purdue University, 1974.
- PETER N. HENRIKSEN II**, *Professor of Physics; Professor of Chemistry* (1970) B.S., Berry College; M.S., Ph.D., University of Georgia, 1968.
- ALAN A. HERBERT**, *Director of Academic User Services* (October 1978) B.S., M.S., The University of Akron, 1985.
- PAUL A. HEROLD**, *Assistant Director of University Communications—Electronic Communications* (November 1980) B.A., The University of Akron, 1978.
- JAY R. HERSHEY**, *Associate Dean of Students and Director of Residence Halls* (July 1967) B.A., Hiram College; M.Ed., University of Illinois at Urbana, 1965.
- VIRGIL D. HICKS**, *Associate Professor of Music; Director of Computer Instruction in Music* (July 1981) B.M., The University of Akron; M.M., University of Miami, 1975.
- ROBERT W. HIGHAM**, *Professor of Criminal Justice Technology* (1977) B.A., Kent State University; J.D., The University of Akron, 1969.
- BETTE S. HILL**, *Associate Professor of Political Science* (1983) B.S., University of Maryland; Ph.D., University of Illinois, 1983.
- JOHN B. HILL, JR.**, *Assistant Professor of Bibliography* (August 1989) B.G.S., Auburn University at Montgomery; M.L.S., Vanderbilt University; M.A., Mankato State College, 1993.
- KATHERINE A. HINCKLEY**, *Associate Professor of Political Science* (1972) B.J., University of Missouri; M.A., Ph.D., Stanford University, 1971.
- JEAN D. HINES**, *Associate Professor of Home Economics and Family Ecology* (1990) B.S., M.Ed., Bowling Green State University; Ph.D., The Ohio State University, 1990.
- DANIEL E. HIPPSHER**, *Head Basketball Coach* (April 1995) B.S., Bowling Green State University; M.Ed., Miami University, 1978.
- JOHN J. HIRSCHBUHL**, *Assistant to the Associate Vice President for Information Services—Instructional Services; Professor of Education* (1971) B.S., M.S., Temple University; Ph.D., Pennsylvania State University, 1971.
- WALTER L. HIXSON**, *Associate Professor of History* (1989) B.A., University of Kentucky; M.A., Western Kentucky University; Ph.D., University of Colorado, 1966.
- LOREN L. HOCH**, *Professor of Education* (1969) B.S., Indiana Central College; M.A., Ball State University; Ed.D., Indiana University at Bloomington, 1968.
- GEORGE V. HODOWANEC**, *Professor of Bibliography* (1983) B.S., Temple University; M.S., Drexel University; Ed.D., Temple University, 1972.
- JAMES H. HOLDA**, *Associate Professor of Biology* (1987) B.S., University of Michigan at Dearborn; Ph.D., Wayne State University, 1982.
- BRUCE HOLLAND**, *Associate Professor of English* (1967) B.A., University of Rochester; M.A., Ph.D., University of Michigan at Ann Arbor, 1972.
- ROBERT M. HOLLAND, JR.**, *Master of University Honors Program; Associate Professor of English* (1978) B.A., Dartmouth College; M.A.T., Harvard University; Ph.D., Indiana University, 1973.
- BRUCE L. HOLLERING**, *Professor of Physical Education* (1983) B.S., Ohio Northern University; M.A., Kent State University; Ph.D., The Ohio State University, 1971.
- CHRISTOPHER P. HOOT**, *Assistant Professor of Art* (1991) B.A., Indiana University; M.F.A., Yale University, 1990.
- DAVID H. HOOVER**, *Associate Professor of Fire Protection Technology; Director of Training Center, Fire and Hazardous Materials* (1983) A.A.S., B.S.T.E., M.S.T.E., The University of Akron; Ph.D., Union Experimenting C&U, 1993.
- DAVID P. HORN**, *Director of College Centered and Planned Giving* (1984) B.A., Borromeo Seminary College; M.A.T.E., The University of Akron, 1990.
- TONYA L. HORN**, *Assistant Director of Admissions for Multicultural* (June 1995) B.A., University of Nebraska at Lincoln, 1989.
- DONALD G. HOWARD**, *Professor of International Business/Marketing* (1987) B.S., M.B.A., Ph.D., The Ohio State University, 1983.
- PHILIP A. HOWARD**, *Assistant Professor of History* (August 1991) B.S., Manchester College; M.A., Ph.D., Indiana University at Bloomington, 1988.
- WILLIAM G. HOYT, JR.**, *Associate Professor of Music* (1981) B.M., University of Wisconsin; M.M., Yale School of Music, 1975.
- ROBERT J. HUFF**, *Associate Professor of Art* (1980) B.F.A., The University of Akron; M.F.A., The Ohio State University, 1980.
- JOHN W. HUGHES**, *Assistant Women's Basketball Coach* (1994) B.S., Palm Beach Atlantic College, 1975.
- WILSON R. HUHN**, *Professor of Law* (1984) B.A., Yale University; J.D., Cornell University, 1977.
- ISAAC C. HUNT, JR.**, *Professor of Law* (July 1987) B.A., Fisk University; L.L.B., University of Virginia, 1962.
- ROBERTA S. HURLEY**, *Professor of Home Economics and Family Ecology* (1987) B.A., Western College for Women; M.S., Case Western Reserve University; Ph.D., The Ohio State University, 1981.
- IOBAL HUBAIN**, *Assistant Professor of Electrical Engineering* (July 1994) B.S., Bangladesh University of Engineering and Technology; M.S., Ph.D., Texas A&M University, 1993.
- NATHAN IDA**, *Professor of Electrical Engineering; Department Chair of Electrical Engineering* (January 1985) B.Sc.E.E., M.Sc.E.E., Ben-Gurion University of the Negev; Ph.D., Colorado State University, 1983.
- JAMES E. INMAN**, *Associate Dean for Internal Affairs and Academic Programs in the College of Business Administration; Professor of Business Law* (1966) B.A., Baldwin-Wallace College; M.B.A., The Ohio State University; J.D., The University of Akron; LL.M., Cleveland State University, 1991.
- AVRAAM I. ISAYEV**, *Professor of Polymer Engineering* (1983) M.Sc., Azerbaijan Institute of Oil and Chemistry; M.Sc., Moscow Institute of Electronic Machine Building; Ph.D., USSR Academy of Sciences, 1970.
- NANCY L. JACOBS**, *Assistant Professor of Home Economics and Family Ecology* (1994) B.A., Miami University; M.S., Case Western Reserve University; Ph.D., Kent State University, 1984.
- MICHAEL J. JALBERT**, *Professor of Labor Studies; Professor of Social Science* (1979) B.S., University of Rhode Island; M.S., University of Massachusetts; J.D., The University of Akron, 1983.
- DAVID L. JAMISON**, *Senior Vice President and Provost; Professor of Communication; NEOUCOM Liaison Officer* (1972) B.A., Muskingum College; M.A., J.D., University of Michigan at Ann Arbor, 1969.
- LOUIS M. JANELLE, JR.**, *Associate Professor of Mathematics; Director of Computing Services* (Wayne College) (1981) B.A., St. Michael's College; M.A.T., Bowling Green State University, 1971.
- ROBERT FIELDS JEANTET**, *Associate Professor of Modern Languages* (1984) B.A., M.A., Queens College; Ph.D., City University of New York, 1976.
- DONALD M. JENKINS**, *Professor of Law* (1965) B.A., J.D., The University of Akron; LL.M., Case Western Reserve University, 1970.
- JOHN H. JIVENS**, *Grant and Contract Accountant* (April 1989) B.B.A., Howard University; M.B.A., The University of Akron, 1993.
- DEBRA L. JOHANYAK**, *Assistant Professor of English* (Wayne College) (1992) B.A., M.A., The University of Akron; Ph.D., Kent State University, 1988.
- PAUL R. JOHN**, *Associate Professor of Drafting and Computer Drafting Technology* (1981) B.S., Kent State University; M.S.T.E., The University of Akron, 1985.
- AVIS L. JOHNSON**, *Associate Professor of Management* (January 1984) B.A., Yankton College; M.A., Kansas State University; M.A., Ph.D., University of Nebraska at Lincoln, 1986.
- LAURA J. JOHNSON**, *Professor of Social Science* (1975) B.A., M.A., The University of Akron, 1975.
- SYLVIA J. JOHNSON**, *Director of Hower House* (January 1987) B.S., The University of Akron, 1962.
- WENDELL A. JOHNSON**, *Professor in the Community and Technical College* (1969) A.A., North Park Junior College; B.S., University of Minnesota; M.Ed., Kent State University; M.S., The University of Akron, 1983.
- SCOTT A. JOHNSTON**, *Associate Professor of Music* (1978) B.M., University of Wisconsin; M.M., The Ohio State University, 1974.
- TUCKER R. JOLLY**, *Associate Professor of Music* (1980) B.M., North Texas State University; M.A., University of Connecticut, 1977.

- GWENDOLYN JONES**, Associate Professor of Business Management Technology (1988) B.A., Notre Dame College; M.B.A., Baldwin-Wallace College; Ph.D., The University of Akron, 1989.
- WILLIAM S. JORDAN, III**, Professor of Law (1985) B.A., Stanford University; J.D., University of Michigan, 1974.
- ROBERT D. JORGENSEN**, Professor of Music; Director of University Bands (1987) B.S.M., University of Illinois at Urbana; M.M., Michigan State University, 1974.
- MANUEL L. JOSE**, Associate Professor of Finance (1990) B.S., James Madison University; M.Acc., M.B.A., Ph.D., Virginia Polytechnic Institute and State University, 1983; C.M.A.
- JOSEPH P. JOYCE**, Manager of Voice Communication and Cable Services (January 1986) B.A., M.S.Ed., Kent State University, 1978.
- LU-KWANG JU**, Associate Professor of Chemical Engineering (1990) B.S., National Taiwan University; M.S., Ph.D., State University of New York at Buffalo, 1988.
- KELLY M. JULIAN**, Assistant Professor of Communication (1992) B.S., Michigan State University; M.A., University of Iowa, 1989.
- DOUGLAS R. KAHL**, Professor of Finance (1989) B.A., University of North Dakota; M.A., M.S., Ph.D., University of Iowa, 1981.
- LINDA KALAFATIS**, Head Softball Coach (1993) B.A., M.A., California University of Pennsylvania, 1993.
- MARC G. KAMINICKI**, Assistant to the Dean for Student Conduct (January 1995) B.S.Ed., Bowling Green State University; M.S.Ed., Kent State University, 1994.
- MARIE M. KANE**, Director of Institutional Research (March 1969) B.A., The University of Akron, 1984.
- JAMES M. KARAS**, Auxiliary Enterprises Accountant (December 1984) B.S., The University of Akron, 1976.
- MARJORIE J. KARLSON**, Manager/Systems Analyst, Mathematical Sciences Computer Laboratory (1984) B.S., Thiel College, 1954.
- KARYN B. KATZ**, Associate Professor of Communicative Disorders (1979) B.S., University of Texas at Austin; M.A., Case Western Reserve University; Ph.D., Kent State University, 1982.
- DARLENE R. KAUSCH**, Associate Professor of Accounting (1979) B.S., M.S., The University of Akron; D.B.A., Kent State University, 1979.
- AZMI KAYA**, Professor of Mechanical Engineering (1970) Diploma, Technical College for Men (Turkey); M.S.M.E., University of Wisconsin; M.S.E.E., Ph.D., University of Minnesota, 1970; P.E., Ohio.
- MARJORIE C. KEIL**, Coordinator of the Writing Center (Wayne College) (1992) A.A., Lorain Community College; B.A., M.A., Cleveland State University, 1991.
- DEBRA S. KELLER**, Director of Network Services (August 1982) B.S.C.I., B.S.A.M., The University of Akron, 1981.
- FRANK N. KELLEY**, Dean of the College of Polymer Science and Polymer Engineering; Professor of Polymer Science (1978) B.S., M.S., Ph.D., The University of Akron, 1961.
- SAMUEL G. KELLY, III**, Assistant Provost; Associate Professor of Mechanical Engineering (August 1982) B.S., M.S., Ph.D., Virginia Polytechnic Institute and State University, 1979.
- JOSEPH P. KENNEDY**, Distinguished Professor of Polymer Science; Distinguished Professor of Chemistry (April 1970) B.Sc., University of Budapest; M.B.A., Rutgers University; Ph.D., University of Vienna, 1954.
- ROBERT B. KENT, II**, Professor of Geography and Planning (1983) B.A., M.A., University of California at Davis; Ph.D., Syracuse University, 1983.
- ELYS L. KETTLUNG**, Reference/User Education Librarian (Wayne College) (1992) B.A., M.L.I.S., University of Wisconsin at Milwaukee, 1991.
- WYATT KILGALLIN**, Associate Professor of Electronic Technology (1986) A.A.S., B.S., Morehead State University; M.S., University of Tennessee at Knoxville, 1983.
- IL-WOON KIM**, Professor of Accounting (January 1986) B.B.A., Yonsei University; M.B.A., Arizona State University; Ph.D., University of Nebraska, 1985.
- DENNIS L. KIMMELL**, Professor of Accounting (1976) B.S., University of Wisconsin at Oshkosh; M.S., Southern Illinois University at Carbondale; D.B.A., Kent State University, 1974; C.P.A., Missouri, Ohio, Wisconsin.
- SHARON L. KIMMELL**, Associate Professor of Accounting; Director of the Accounting Internship Program (1981) B.A., College of Wooster, M.B.A., University of Wisconsin; D.B.A., Kent State University, 1986; C.P.A., Ohio.
- BARBARA R. KIMYON**, Instructor in the English Language Institute; Assistant Director of the English Language Institute (January 1981) B.A., Dartmouth College; M.S., Georgetown University, 1979.
- CHERYL S. KING**, Assistant Professor of Public Administration and Urban Studies (1993) B.A., University of Texas at the Permian Basin; M.A., Ph.D., University of Colorado at Denver, 1992.
- JAMES E. KING I**, Assistant Professor of Social Work (1990) B.A., LeMoyne-Owen College; M.S.W., University of Michigan; Ph.D., University of Pittsburgh, 1991.
- MARY C. KING**, Coordinator of Basic Writing; Coordinator of the Writing Laboratory of Developmental Programs (July 1975) B.A., M.A., The University of Akron, 1978.
- RANDALL H. KING**, Professor of Economics (1978) B.S.B.A., M.A., Ph.D., The Ohio State University, 1978.
- ELIZABETH S. KINON**, Associate Professor of Nursing; Director of the Center of Nursing (1987) B.S.N., Montana State University; M.S.Ed., The University of Akron; M.S.N., Kent State University; Ed.D., The University of Akron, 1987.
- MARY K. KIRTZ**, Associate Professor of English; Director of Canadian Studies (1985) B.A., University of Toronto; M.A.T., Oberlin College; Ph.D., Case Western Reserve University, 1984.
- GAY C. KITSON**, Professor of Sociology (July 1989) B.S., Northwestern University; M.A., Ph.D., University of North Carolina at Chapel Hill, 1972.
- KEITH A. KLAFEHN**, Professor of Management and Health Care Systems (1970) B.S.I.D., M.S.I.M., Clarkson College of Technology; D.B.A., Kent State University, 1973.
- DENNIS A. KLEIDON**, Professor of Art; Professor of Commercial Art (1969) B.F.A., Illinois Wesleyan University; M.S., Illinois State University, 1967.
- ROSE A. KLEIDON**, Professor in the Community and Technical College (1970) B.A., Illinois Wesleyan University; M.A., University of Illinois at Urbana, 1968.
- KENNETH L. KLIKA**, Director of Construction Technology Program; Associate Professor of Construction Technology (March 1972) A.A.S., B.C.T., M.S.T.E., The University of Akron; M.S.C.E., Case Western Reserve University, 1990.
- WILLIAM E. KLINGELE**, Dean of the College of Education; Professor of Education (August 1989) B.S., Western Illinois University; M.S., Ed.D., Indiana University at Bloomington, 1970.
- MONA L. KLINGLER**, Assistant Professor of Communicative Disorders (1985) B.A., M.A., The University of Akron, 1981.
- RICHARD E. KLOSTERMAN**, Professor of Geography and Planning; Professor of Urban Studies (1983) B.S., Purdue University; Ph.D., Cornell University, 1976.
- WILLIAM G. KOFRON**, Professor of Chemistry (1965) B.S., University of Notre Dame; Ph.D., University of Rochester, 1961.
- CHRISTINE A. KOLACZEWSKI-FERRIS**, Coordinator of Mathematics Laboratory (July 1981) B.S., M.S., The University of Akron, 1981.
- KATHARINE Y. KOLCABA**, Instructor in Nursing (1987) M.S.N., Frances Payne Bolton School of Nursing, 1987.
- CHRISTOPHER J. KOLLER**, NCOIC, GMC Records (October 1990) Sergeant, USAF, Administration.
- ROSE MARIE B. KONET**, Manager of Computer Based Education and Testing (July 1976) B.S., The University of Akron, 1975.
- MARY S. KONKEL**, Head of Cataloging; Assistant Professor of Bibliography (November 1992) B.A., M.L.S., University of Wisconsin at Milwaukee; M.A., Governors State University, 1992.
- MARGERIE B. KOUSED**, Professor of Law (1974) B.S.Ed., Miami University; J.D., Case Western Reserve University, 1974.
- MARTHA M. KORY**, Associate Professor of Biology; B.S./M.D. Program Coordinator (1984) B.A., B.S., M.A., Indiana University; Ph.D., University of Nebraska, 1984.
- GERALD F. KOSER**, Associate Chair Department of Chemistry; Professor of Chemistry (1969) B.S., The Ohio State University; M.S., Ph.D., University of Illinois at Urbana, 1968.
- RICHARD J. KOVACH**, Professor of Law (1980) A.B., Oberlin College; J.D., Harvard University, 1974.
- KEVIN L. KREIDER**, Associate Professor of Mathematical Sciences (1989) B.A., Wittenberg University; M.S., Ph.D., Purdue University, 1986.
- MARYHELEN C. KREIDLER**, Associate Professor of Nursing (1985) B.S., St. John College; M.A., M.Ed., Ed.D., Columbia University, 1978.
- ALAN G. KRIGLINE**, Professor of Management (1973) B.I.E., University of Florida; M.B.A., Ph.D., Georgia State University, 1977.
- ELISE H. KRIGLINE**, Instructor in Home Economics and Family Ecology (March 1978) B.Ed., University of Miami; M.Ed., Georgia State University, 1973.
- LALA B. KRISHNA**, Professor of Mathematical Sciences; Professor of Mechanical Engineering (1981) B.Sc., M.Sc., Patna University (India); M.A., Ph.D., Kent State University, 1979.
- RONALD J. KUDLA**, Professor of Finance; Department Chair of Finance (August 1990) B.S., Pennsylvania State University; M.B.A., Ph.D., University of Pittsburgh, 1978.
- JAMES C. KUHN, IV**, Assistant Professor of Bibliography (June 1990) B.A., Case Western Reserve University; M.L.S., Kent State University, 1989.
- LOUISE M. KUHN**, Director of Development for College of Fine and Applied Arts (December 1983) B.A., Baldwin-Wallace College, 1963.
- CHARLES A. KUNSMAN**, Aquatics Manager (July 1991) B.S.Ed., Cleveland State University; M.S.Ed., The University of Akron, 1980.
- A. W. GERHARD KUNZE**, Professor of Geology (1974) B.S., Ph.D., Pennsylvania State University, 1973.
- SOPHIE T. KUS-PATENA**, Academic Adviser (March 1990) B.A., Cleveland State University; M.A., John Carroll University, 1981.
- SUSAN N. KUSHNER**, Assistant Professor of Education (1994) B.S., Ohio University; M.A., John Carroll University, 1979.
- PAUL J. KUZDRALL**, Professor of Management (1985) B.S.E., University of Michigan; M.B.A., Southern Illinois University at Edwards; Ph.D., Saint Louis University, 1977.
- THEIN KYU**, Professor of Polymer Engineering (1983) B.Eng., Kyoto Institute of Technology; M.Eng., D.Eng., Kyoto University, 1980.
- DAVID E. KYVIG**, Professor of History (1971) B.A., Kalamazoo College; Ph.D., Northwestern University, 1971.
- GRETCHEN A. LAATSCH**, Associate Director of Gardner Student Center; Director of Gardner Student Center Calendar and Conference Services (August 1979) B.S., The University of Akron; M.S., Indiana University, 1970.
- ROBERT G. LACIVITA**, Athletic Ticket Manager (August 1986) B.A., Indiana University of Pennsylvania; M.A., Ph.D., University of Pittsburgh, 1984.
- DONALD V. LACONI**, Associate Professor of Hospitality Management; Assistant to the Dean for Advising Services in the Community and Technical College; Adjunct Associate Professor of Home Economics and Family Ecology; (1984) Assoc., B.S.Tech.Ed., The University of Akron; M.Ed., Kent State University, 1988.
- J. ELOISE LAFFERTY**, Director of Center for Employee Development and Training (October 1980) B.A., Kent State University, 1960.
- JOHN A. LAGUARDIA**, Executive Director of Alumni Association (June 1994) B.A., M.A., The University of Akron, 1974.
- KAREN E. LAHEY**, Associate Professor of Finance; Charles Herberich Associate Professor of Real Estate (1991) B.A., University of Florida; M.B.A., Ph.D., Florida State University, 1985.
- PAUL C. LAM**, Associate Dean of Engineering for Undergraduate Studies and Minority Affairs; Associate Professor of Mechanical Engineering (1980) B.S., Purdue University; M.S., University of Illinois at Urbana; Ph.D., The University of Akron, 1978.
- JOHN C. LANSHE**, Academic Adviser (June 1981) B.A., The University of Akron; M.A., Bowling Green State University, 1981.
- ELIZABETH A. LARVIERE**, Associate Professor of Office Administration (1985) A.A., Cape Cod Community College; B.S., Salem State College; M.Ed., Florida Atlantic University; Ph.D., Arizona State University, 1984.
- JOSEPH A. LAROSE**, Assistant Professor of Bibliography (October 1987) B.A., M.A., The University of Akron; M.L.S., Kent State University, 1988.
- ANTHONY J. LASALVIA**, Assistant Professor of Criminal Justice Technology; Chair, Public Service Technology Division (1992) B.S.S., John Carroll University; M.S.W., University of Michigan at Ann Arbor; J.D., The University of Akron, 1972.

- EDWARD B. LASHER**, *Professor of Education* (1972) B.S., State University of New York College at Oneonta; M.S., Ed.S., Indiana University at Bloomington; Ed.D., University of North Dakota, 1971.
- EDWARD J. LAUGHNER**, *Assistant Professor of Art* (1984) B.S.Ed., Youngstown State University; M.A., Kent State University, 1978.
- LUCINDA S. LAVELLI**, *Associate Professor of Dance; Director of the School of Dance* (1993) B.A., Dennison University; M.F.A., Case Western Reserve University, 1991
- DIANE L. LAZZERINI**, *Academic Adviser* (July 1979) B.A., M.A., The University of Akron, 1970.
- PETER J. LEAHY**, *Associate Professor of Public Administration and Urban Studies; Center Associate, Center for Urban Studies;* (January 1980) B.A., St. Peters College; M.A., The University of Akron; Ph.D., Syracuse University, 1975.
- VIOLET E. LEATHERS**, *Associate Professor of Education* (1974) B.S.Ed., M.S.Ed., Ed.D., The University of Akron, 1985.
- SUNGGYU LEE**, *Robert Iredell Professor of Chemical Engineering; Department Chair of Chemical Engineering; Director of the Process Research Center* (1980) B.S., M.S., Seoul National University; Ph.D., Case Western Reserve University, 1980.
- CONSTANCE L. LEISTIKO**, *Assistant Dean for External Programs* (November 1983) B.S., M.A., Florida State University; J.D., The University of Akron, 1979.
- LYNN M. LENART**, *Assistant Law Librarian for Reference Services* (1982) B.A., The University of Akron; M.L.S., Kent State University, 1990.
- JAMES V. LENAUITT**, *Associate Professor of Art* (1969) B.F.A., M.F.A., Ohio University, 1969.
- PAUL LENART SCHUTZ**, *Associate Professor of Education* (1991) B.A., B.S., Winona State College; M.A., University of Wisconsin; Ph.D., University of Texas, 1989.
- BRIAN P. LEONARD**, *Professor of Mechanical Engineering* (August 1985) B.M.E., University of Melbourne; M.A.E., Ph.D., Cornell University, 1965.
- JANE K. LEONARD**, *Professor of History* (1987) B.S., Milwaukee-Downer College; M.A., University of Idaho; Ph.D., Cornell University, 1971.
- ARKADII I. LEONOV**, *Professor of Polymer Engineering* (1988) B.S., Moscow Institute of Chemical Engineering; M.S., Moscow State University; Ph.D., USSR Academy of Sciences; Ph.D., Karpov Physico-Chemical Research Institute, Moscow USSR, 1969.
- SHARON A. LESNER**, *Professor of Communicative Disorders* (1979) B.A., Hiram College; M.A., Kent State University; M.A., Wayne State University; Ph.D., The Ohio State University, 1979.
- PAUL E. LEVY**, *Associate Professor of Psychology* (1989) B.A., Washington and Lee University; M.S., Ph.D., Virginia Polytechnic Institute and State University, 1989.
- RICHARD H. LEWANDOWSKI**, *Associate Professor of Business Management Technology* (January 1984) B.S., United States Military Academy; M.A., Georgetown University; M.B.A., The University of Akron, 1981.
- WILLIAM LEWIS, III**, *Director of the Black Cultural Center; Adjunct Assistant Professor of Theatre Arts* (July 1989) B.A., Fisk University; M.Div., Chicago Theological Seminary; M.A., University of Arizona, 1974.
- DALE M. LEWISON**, *Professor of Marketing; Department Chair of Marketing* (1981) B.Ed., University of Wisconsin; M.A., Ph.D., University of Oklahoma, 1974.
- ALBERT H. LEYERLE**, *Professor of Law* (1974) B.S., The Ohio State University; J.D. Case Western Reserve University, 1960.
- HUEY-LI LI**, *Assistant Professor of Education* (1995) B.A., National Taiwan University; M.S.Ed., Eastern Illinois University; M.A., Southern Illinois University; Ph.D., University of Illinois at Urbana, 1994.
- ROBERT YING-KO LIANG**, *Professor of Civil Engineering; Department Chair of Civil Engineering* (1985) B.S.C.E., Tamkang University; M.S.C.E., North Carolina State University; Ph.D., University of California at Berkeley, 1985.
- ALVIN H. LIEBERMAN**, *Associate Professor of Accounting; Coordinator of Taxation Studies* (1969) B.S., J.D., M.B.A., The University of Akron, 1969; C.P.A., Ohio.
- THOMAS J. LIGGETT**, *Assistant Director of Sports Information* (February 1989) B.A., The University of Akron, 1987.
- HUGO LIJERON**, *Professor of Modern Languages; Director of the Latin American Studies Program* (1963) B.A., LaSalle University (Bolivia); LL.D., LL.B., Universidad San Francisco Xavier de Chuquisaca (Bolivia); M.A., Middlebury College; Ph.D., University of Madrid (Spain), 1965.
- ANNA L. LILE**, *Assistant Director of Alumni Association* (March 1993) B.A., Gordon College, 1988.
- EDWARD C. LIM**, *Goodyear Professor of Chemistry* (June 1989) B.S., St. Procopius College; M.S., Ph.D., Oklahoma State University, 1959.
- LUNG-HO LIN**, *Associate Professor of Economics* (January 1978) B.A., M.A., National Chengchi University (Taiwan); M.A., Ph.D., University of Notre Dame, 1974.
- YUEH-JAW R. LIN**, *Associate Professor of Mechanical Engineering* (1988) B.S., National Tsing-Hua University; M.S., Ph.D., University of Illinois Chicago Circle, 1988.
- PETER LINBERGER**, *Assistant Professor of Bibliography* (February 1980) B.S., M.S., The University of Akron; M.L.S., Kent State University, 1988.
- LINDA G. LINC**, *Professor of Nursing* (1982) B.S.N., M.S.N., Ph.D., Kent State University, 1983.
- JULIA A. LINDSEY**, *Assistant Professor of Education* (1994) B.S., Miami University; M.A., Ph.D., Ball State University, 1978.
- NANCY E. LINEBURGH**, *Assistant Professor of Music* (1992) B.M.E., Indiana University; M.M., Holy Names College, M.E.E., Xavier College, 1992.
- KATHY J. LISZKA**, *Assistant Professor of Mathematical Sciences* (1993) B.A., Thiel College; M.S., Ph.D., Kent State University, 1992.
- MICHAEL P. LITKA**, *Professor of Business Law* (1971) B.A., Grinnell College; M.A., J.D., University of Iowa, 1958.
- JON A. LOESCH**, *Instructor in Business Management Technology; Assistant Director of Computing Services Technology* (Wayne College) (July 1993) B.B.A., Kent State University; M.B.A., Kennesaw Junior College, 1988.
- KENNETH C. LOLLA**, *Head Soccer Coach* (August 1993) B.S., Duke University, 1986.
- JOAN C. LONG**, *Assistant Professor of Bibliography* (1993) B.A., MacMurray College; M.S.L.S., Case Western Reserve University; M.B.A., Baldwin-Wallace College, 1977.
- ROBERT G. LORD**, *Professor of Psychology; Department Chair of Psychology* (1974) B.A., University of Michigan at Ann Arbor; M.S., Ph.D., Carnegie-Mellon University, 1975.
- DAVID J. LOUSCHER**, *Professor of Political Science; Department Chair of Political Science* (1970) B.A., Morningside College; M.A., American University; M.A., Ph.D., University of Wisconsin, 1972.
- SUSAN J. LOUTHAN-PALLA**, *Associate Director of Student Financial Aid* (May 1992) A.D., B.S., The University of Akron, 1983.
- ANNE G. LOVE**, *Assistant to the Vice President for Student Affairs* (June 1995) B.S., St. Lawrence University; M.Ed., Pennsylvania State University; Ph.D., Syracuse University, 1993.
- TAMARA A. LOWE**, *Assistant Budget Director* (June 1977) B.S., The University of Akron, 1988.
- THERESE L. LUECK**, *Associate Professor of Communication* (1989) A.A., B.A., Thomas More College; M.A., Ph.D., Bowling Green State University, 1989.
- JAMES M. LYNN**, *Associate Professor of Communicative Disorders; Director of School of Communicative Disorders* (1980) B.S., M.A., Ph.D., University of Iowa, 1975.
- LAURENCE J. C. MA**, *Professor of Geography and Planning; Coordinator of Asian Urbanization Programs* (1971) B.A., National Taiwan University; M.A., Kent State University; Ph.D., University of Michigan at Ann Arbor, 1971.
- MARY JO MacCRACKEN**, *Professor of Physical Education* (1968) B.A., College of Wooster; M.A., The University of Akron; Ph.D., Kent State University, 1980.
- ALICE J. MacDONALD**, *Instructor in English* (1969) B.A., M.A., The University of Akron, 1969.
- SUZANNE C. MacDONALD**, *Associate Professor of Education* (1989) B.S., Otterbein College; M.A., California State University at Los Angeles; Ed.D., University of Hawaii, 1987.
- BARBARA J. MacGREGOR**, *Professor of Music* (1969) B.M., The University of Akron; M.M., Cleveland Institute of Music, 1967.
- LAZARUS W. MACIOR**, *Distinguished Professor of Biology* (1967) B.A., M.A., Columbia University; Ph.D., University of Wisconsin, 1959.
- DANIEL C. MACK**, *Assistant Professor of Bibliography* (January 1990) B.A., Youngstown State University; M.L.S., Kent State University, 1989.
- SUSAN MACKIEWICZ**, *Assistant Professor of History* (1990) B.A., Wilson College; M.A., Ph.D., University of Delaware, 1988.
- CHERIE A. MADARASH-HILL**, *Instructor in Bibliography* (May 1989) B.A., University of Saskatchewan (Canada); M.L.S., Vanderbilt University, 1984.
- LAURIE E. MADDEN**, *Assistant Vice President for Physical Facilities* (March 1989) A.A.S., B.S.B.A., The University of Akron, 1985.
- EUGENE A. MAJO**, *Professor of Modern Languages* (1970) B.A., M.A., S.T.L., St. Louis University; Ph.D., University of California at Los Angeles, 1967.
- GEORGE J. MAKAR**, *Professor in the Community and Technical College* (1973) B.S., Pennsylvania State University; M.Ed., Duquesne University; Ed.D., University of Pittsburgh, 1973.
- PATSY A. MALAVITE**, *Associate Professor of Business and Office Technology* (Wayne College) (1984) B.A., B.S., Ohio University; M.Ed., Kent State University, 1983.
- DEVINDER M. MALHOTRA**, *Professor of Economics; Department Chair of Economics* (1979) B.A., M.A., University of Delhi; Ph.D., Kansas State University, 1979.
- YOGENDRA K. MALIK**, *Professor of Political Science* (1969) B.A., M.A., Punjab University; M.A., Ph.D., University of Florida, 1966.
- ROBERT R. MALLIK**, *Associate Professor of Physics; Associate Professor of Chemistry* (1988) B.S., Ph.D., Leicester Polytechnic, 1985.
- TED A. MALLO**, *General Counsel; Secretary of the Board of Trustees; Inspector General Liaison; Adjunct Associate Professor of Education* (July 1969) B.S.Ed., M.S., J.D., The University of Akron, 1972.
- ELIZABETH MANCKE**, *Assistant Professor of History* (1994) B.A., Colorado College; M.A., University of British Columbia; Ph.D., John Hopkins University, 1990.
- JOANNE M. MARCHIONE**, *Associate Professor of Nursing* (1973) B.S.N., Case Western Reserve University; M.A.Ed., University of Santa Clara; M.A., University of Washington, 1968.
- TIMOTHY S. MARGUSH**, *Assistant Professor of Mathematical Sciences* (1982) B.S., Indiana University of Pennsylvania; M.A., Ph.D., Bowling Green State University, 1980.
- RICHARD M. MARINGER**, *Assistant Professor of Business and Office Technology* (Wayne College) (1986) B.S., U.S. Military Academy; M.S.B.A., Boston University; M.B.A., The University of Akron, 1991.
- FRANK MARINI**, *Professor of Political Science; Professor of Public Administration and Urban Studies* (June 1985) B.A., M.A., Arizona State University; Ph.D., University of California at Berkeley, 1966.
- DEBORAH D. MARINO**, *Assistant Professor of Home Economics and Family Ecology* (1994) B.S., Saint Mary's College; M.S., Drexel University; M.S., Ph.D., University of California at Berkeley, 1983; R.D. Illinois.
- DORIS MARINO**, *Associate Professor of Physical Education; Department Chair of Physical Education* (1989) B.A., University of Michigan-Dearborn; M.P.H., Ph.D., University of Michigan-Ann Arbor, 1984.
- NANCY E. MARION**, *Associate Professor of Political Science* (August 1990) B.S., Pennsylvania State University; M.S., American University; M.A., Ph.D., State University of New York at Binghamton, 1990.
- JOHN A. MAROLI**, *Coordinator of the Math Center* (Wayne College) (August 1992) B.S., M.A., Ph.D., Bowling Green State University, 1989.
- JESSE F. MARQUETTE**, *Professor of Political Science; Director of Survey Research Center* (1971) B.A., M.A., Ph.D., University of Florida, 1971.
- ROBERTA P. MARQUETTE**, *Professor of Accounting* (1981) B.S., University of Florida; M.B.A., The University of Akron; D.B.A., Kent State University, 1980; C.P.A., Ohio.
- GUY J. MARRELLI**, *Electrical Engineer* (June 1990) B.E.E., M.S.E.E., Cleveland State University, 1975.
- ROBERT KENT MARSDEN**, *Director of Development for College of Polymer Science and Polymer Engineering* (January 1984) B.A., The University of Akron, 1970.
- REBECCA S. MARSH**, *Associate Professor of Computer Programming Technology* (1981) B.A., M.A., Memphis State University, 1973.
- RODNEY S. MARSHALL**, *Manager of Academic User Services* (1972) B.S.B.A., Bowling Green State University; M.S.T.E., The University of Akron, 1978.
- SPENCER MARSTON, JR.**, *Director of Gardner Student Center* (1970) B.S.L.E., M.S.Tech.Ed., The University of Akron, 1976.
- JUANITA K. MARTIN**, *Clinical Psychologist* (1988) B.A., Brown University; M.Ed., University of Hartford; M.A., Ph.D., Kent State University, 1990.
- LAWRENCE T. MARTIN**, *Professor of English* (1977) A.B., Saint Francis Seminary; M.A., Ph.D., University of Wisconsin, 1977.

- ROBERTA R. MARTIN**, *Academic Adviser* (July 1968) B.S., M.A., The Ohio State University; Ed.D., The University of Akron, 1987.
- JANET MARTING**, *Associate Professor of English* (1984) B.A., University of Vermont; M.A., Colorado State University; Ph.D., Michigan State University, 1982.
- AMY H. MAST**, *Coordinator of Training and Special Programs* (Wayne College) (1992) B.S., M.S., The University of Akron, 1990.
- KENNETH E. MAST**, *Assistant Dean and Director of Undergraduate Business Programs for the College of Business Administration; Professor of Marketing* (1970) B.A., M.B.A., The Ohio State University; D.B.A., Kent State University, 1980.
- HERBERT S. MATHENY, JR.**, *Manager of Operations* (August 1991) A.A.S., The University of Akron; B.A., Hiram College, 1987.
- WAYNE L. MATTICE**, *Alex Schulman Professor of Polymer Science* (July 1986) B.A., Grinnell College; Ph.D., Duke University, 1968.
- RUTH E. MATTY**, *Assistant Controller* (March 1980) B.S., M.B.A., The University of Akron, 1986.
- RAYMOND R. McBETH**, *Assistant Dean and Director of Academic Affairs; Professor of Business Management Technology* (Wayne College) (1993) B.A., M.A., University of Detroit; Ph.D., University of Toledo, 1989.
- CHRISTINE B. MCCALMAN**, *Instructor in Nursing* (1989) B.S.R.N., The Ohio State University; M.S.N., Kent State University, 1988.
- ANDREW BRADLEY McCLAIN**, *Director of Pre-College Programs* (June 1987) B.A., The University of Akron; M.Ed., Kent State University; J.D., The University of Akron, 1988.
- McKEE J. McCLENDON**, *Professor of Sociology* (1972) B.A., M.A., Ph.D., University of Kansas, 1972.
- RONALD C. McCLENDON**, *Assistant Professor of Education* (1990) B.A., M.A., The University of Akron, 1982.
- NANCY J. McCLOUD**, *Coordinator, Network Services* (January 1990) B.B.A., Kent State University, 1985.
- REBECCA L. McCOLLUM**, *Associate Professor of Computer Programming Technology* (1989) B.S., Kent State University; M.B.A., The University of Akron, 1988.
- DAVID A. McCONNELL**, *Associate Professor of Geology* (August 1989) B.S., The Queen's University; M.S., Oklahoma State University; Ph.D., Texas A&M University, 1987.
- N. JUSTICE McCORMICK**, *Director of Development for the College of Business Administration; Assistant to the Dean for the College of Business Administration* (November 1993) B.A., Indiana University; M.A., The Ohio State University; M.B.A., Radford College, 1986.
- DIANE T. McCORT**, *Assistant to the Senior Director of Facilities Planning and Construction; Assistant to the University Architect; Adjunct Assistant Professor of Home Economics and Family Ecology* (February 1987) B.S., Miami University; M.Ed., Kent State University; M.Arch., University of Colorado, 1982.
- MICHAEL A. McDANIEL**, *Assistant Professor of Psychology* (1992) B.A., University of Delaware; M.A., Loyola University; M.A., Ph.D., George Washington University, 1986.
- RONALD L. McDONALD**, *Associate Director of Residence Halls* (August 1979) B.A., The University of Akron; M.A., Bowling Green State University, 1976.
- ROBERT L. McELWEE**, *Associate Professor of Political Science* (Wayne College) (1972) B.A., M.A., Kent State University, 1969.
- ANNE S. McFARLAND**, *Associate Law Librarian* (October 1986) A.B., Oberlin College; M.L.S., Case Western Reserve University; J.D., Cleveland State University, 1974.
- RICHARD E. McGRAW**, *Manager of Media Production Facilities; Adjunct Assistant Professor of Communication* (July 1973) B.A., The University of Akron, 1980.
- WILLIAM McGUCKEN**, *Professor of History* (1968) B.Sc. (Mathematics), B.Sc. (Physics), M.A., Queens University, Belfast (N. Ireland); Ph.D., The University of Pennsylvania, 1968.
- AMY L. McGUIRE**, *Director of Major Gifts; Associate Director of Planned Giving* (October 1991) B.A., Kent State University, 1991.
- ROBERT A. McGUIRE**, *Professor of Economics* (August 1990) B.A., California State University at Long Beach; M.A., Ph.D., University of Washington, 1978.
- DONALD McIntYRE**, *Professor of Chemistry; Professor of Polymer Science* (1966) A.B., Lafayette College; Ph.D., Cornell University, 1954.
- KATHLEEN A. McIntYRE**, *Coordinator of the Tutorial Program; Counselor in Developmental Programs* (1977) B.A., Ursuline College; M.A., The University of Akron, 1977.
- SUSAN P. McKIERNAN**, *Assistant Director of the School of Art* (1977) B.F.A., M.S.T.E., The University of Akron, 1987.
- ANNETTE A. McKISSICK**, *Public Services Librarian* (1994) B.A., Cleveland State University; M.L.S., University of Pittsburgh, 1994.
- MARTIN M. McKOSKI**, *Associate Professor of English; General Studies Course Director: English Composition* (1974) B.A., Saint Joseph's College; M.A., The University of Akron; Ph.D., Florida State University, 1972.
- WILLIAM E. McMAHON**, *Professor of Philosophy; Department Chair of Philosophy* (1969) B.A., University of Notre Dame; M.A., Brown University; Ph.D., University of Notre Dame, 1970.
- MARTHA J. McNAMARA**, *Instructor in the English Language Institute* (August 1982) B.A., State University of New York at Oneonta; M.Ed., State University of New York at Buffalo; M.A., University of Pittsburgh, 1980.
- DOUGLAS A. McNUTT**, *Director of Student Financial Aid* (January 1995) A.A.S., Devry Institute of Technology; B.A., M.A., Governor's State University, 1979.
- MATTHEW J. McTAGGERT**, *Assistant Professor of Education* (1991) B.A., University of Colorado at Denver; M.S., Ph.D., Virginia Commonwealth University, 1991.
- LAVERNE J. MECONI**, *Professor of Education* (1967) B.S., West Chester State College (Pennsylvania); M.A., University of Pennsylvania; Ph.D., The Ohio State University, 1966.
- GARY E. MEEK**, *Professor of Management; Department Chair of Management* (1971) B.S., Cleveland State University; Ph.D., Case Western Reserve University, 1970.
- MARY E. MEEKER**, *Instructor in Nursing* (1993) B.S.N., M.S.N., The University of Akron, 1992.
- CAROLYN L. MEHL**, *Director of Development for Buchtel College of Arts and Sciences/ Administrative Services* (November 1979) B.F.A., B.S.Ed., Bowling Green State University; M.S.Ed., The University of Akron, 1983.
- EBERHARD A. MEINECKE**, *Professor of Mechanical Engineering; Professor of Polymer Science* (October 1963) D. Eng., Braunschweig Institute of Technology (Germany), 1960.
- ROBIN L. MEINZER**, *Director of Development for School of Law* (February 1994) B.A., Miami University; J.D., John Marshall Law School, 1993.
- WARNER D. MENDENHALL**, *Professor of Political Science* (Wayne College) (1972) B.S., Davidson College; M.A., Duke University; Ph.D., Kent State University, 1982.
- DONALD J. METZGER**, *Professor of Anthropology* (1968) B.A., Youngstown University; Ph.D., University of Pittsburgh, 1968.
- CHRISTOPHER P. MEYER**, *Associate Professor of Art* (1972) B.A., Washington and Lee University; M.F.A., The Ohio State University, 1972.
- DAVID G. MEYER**, *Associate Professor of Management* (1989) B.S., University of Michigan; M.B.A., Concordia University; Ph.D., University of Michigan, 1986.
- JAMES M. MEYER**, *Assistant Football Coach-Defensive Line* (January 1995) Assoc., B.S., M.S., The University of Akron, 1982.
- CHAND MIDHA**, *Associate Professor of Mathematical Sciences; Director of the Center for Statistical Consulting; Program Coordinator of Statistics* (1983) M.S., Indian Agricultural Research Institute; Ph.D., Iowa State University, 1980.
- JOSEPH MIGDEN**, *Academic Adviser; Assistant Director of the Academic Advisement Center* (July 1975) B.B.A., M.Ed., Kent State University; Ph.D., The University of Akron, 1988.
- ADEL A. MIGID-HAMZZA**, *Professor of Theatre Arts* (1980) B.F.A., School of Dramatic Arts, Cairo; M.F.A., Ohio University, 1972.
- NELL M. MILES**, *Director of Affirmative Action; Equal Employment Opportunity Officer; Title IX Coordinator* (January 1989) B.S., Northeastern University, 1974.
- THOMAS T. MILES**, *Associate Professor of Communication* (October 1972) B.S., M.S., Ed.A., Indiana State University; Ph.D., University of Iowa, 1973.
- CHRISTOPHER M. MILLER**, *Assistant Professor of Civil Engineering* (1995) B.S., M.S., University of Iowa, 1992.
- JOHN V. MILLER, JR.**, *Associate Professor of Bibliography; Director of Archival Services; Director of the American History Research Center; University Records Officer* (July 1972) B.A., Franklin and Marshall College; M.A., University of Delaware, 1965.
- MARIAN A. MILLER**, *Associate Professor of Political Science* (1990) A.A., B.A., M.A., Ph.D., University of Southern California Los Angeles, 1988.
- WILLIAM I. MILLER**, *Associate Professor of Modern Languages* (1970) B.A., Wittenberg University; Ph.D., University of Florida, 1970.
- AMY MILSTED**, *Associate Professor of Biology* (1993) B.S.Ed., The Ohio State University; Ph.D., City University of New York, 1977.
- JANET L. MINC**, *Associate Professor of English* (Wayne College) (1978) B.A., Hofstra University; Ph.D., State University of New York at Binghamton, 1979.
- JOYCE E. MIRMAN**, *Professor of Computer Programming Technology; Chair, Business Technology Division* (1976) A.A.S., B.S.Tech.Ed., M.S.Tech.Ed., The University of Akron, 1980.
- RANDALL J. MITCHELL**, *Assistant Professor of Biology* (1995) B.S., University of California; M.A., Ph.D., University of California-Riverside, 1991.
- REBECCA L. MITCHELL**, *Instructor in Nursing* (1994) B.S.N., M.S.N., Kent State University, 1991.
- CHARLES B. MONROE**, *Professor of Geography and Planning; Department Chair of Geography and Planning; Center Associate, Center for Urban Studies* (1981) B.A., University of Wisconsin; M.A., Ph.D., Pennsylvania State University, 1974.
- SANDRA F. MONTGOMERY**, *Assistant Director of Student Financial Aid* (August 1993) B.B.A., Kent State University; M.B.A., The University of Akron, 1992.
- CHARLES K. MOORE, JR.**, *Professor of Accounting* (January 1973) A.A., Angelo State University; B.B.A., M.B.A., D.B.A., Texas Technical University, 1973; C.P.A., Texas.
- LINDA L. MOORE**, *Dean of the College of Fine and Applied Arts; Professor of Communication* (1978) B.S., M.A., Bradley University; Ph.D., Kent State University, 1973.
- RANDY MOORE**, *Dean of the Buchtel College of Arts and Sciences; Professor of Biology* (July 1993) B.S., Texas A&M University; M.S., University of Georgia; Ph.D., University of California at Los Angeles, 1980.
- JOHN W. MORRISON, II**, *Instructor in Commercial Art Program* (August 1986) B.F.A., The University of Akron, 1980.
- DOROTHY C. MOSES**, *Professor of Allied Health Technology; Professor of Biology* (1981) B.S., Bates College; M.A., Mount Holyoke College; Ph.D., Kent State University, 1983.
- BARBARA G. MOSS**, *Associate Professor of Education* (1989) B.S., The Ohio State University; M.Ed., Ph.D., Kent State University, 1988.
- RICHARD A. MOSTARDI**, *Professor of Biology* (1967) B.S.Ed., M.Ed., Kent State University; Ph.D., The Ohio State University, 1968.
- SAMUEL A. MUELLER**, *Associate Professor of Sociology* (1973) B.A., Valparaiso University; M.A., Roosevelt University; Ph.D., Northwestern University, 1971.
- DALE H. MUGLER**, *Professor of Mathematical Sciences; Professor of Biomedical Engineering* (1989) B.A., University of Colorado; M.A., Ph.D., Northwestern University, 1974.
- KARLA T. MUGLER**, *Dean of University College; Coordinator of Academic Support Programs* (January 1990) B.A., Kent State University; M.A., Ph.D., Northwestern University, 1974.
- JOHN MUMPER**, *Professor of Community Services Technology* (January 1977) B.A., The University of Akron; M.S.S.W., University of Louisville; J.D., The University of Akron, 1981.
- DAVIDSON MUNODAWAFA**, *Associate Professor of Physical Education* (August 1990) B.Sc., Kansas State University; M.Ed., Ed.D., University of Arkansas, 1990.
- MARK S. MURPHY**, *Assistant Football Coach-Defensive Back Coach* (January 1995) B.S., West Liberty State College, 1980.
- MARTIN D. MURPHY**, *Professor of Psychology* (1975) A.B., Dartmouth College; M.S., Ph.D., University of Illinois at Urbana, 1975.
- CONNIE F. MURRAY**, *Senior Associate Director of Admissions for Operations* (June 1989) B.A., M.A., The University of Akron, 1992.
- HARRY MURUTES**, *Assistant Professor of Art* (1982) B.S., M.A., Kent State University; M.A., The Ohio State University; Ph.D., University of Michigan, 1983.
- JEROME MUSHKAT**, *Professor of History* (1962) B.A., M.A., D.S.S., Syracuse University, 1964.
- STEVEN C. MYERS**, *Associate Professor of Economics* (1979) B.S.Ec., M.A., West Virginia University; M.A., Ph.D., The Ohio State University, 1980.
- DANIEL M. NELSON**, *Professor of History; Department Chair of History* (1970) B.A., Ohio Wesleyan University; M.A., The Ohio State University; Ph.D., University of Wisconsin, 1967.
- WILLIAM E. NEMEC**, *Professor of Education* (1974) B.S.S.S., John Carroll University; M.Ed., Ohio University; Ph.D., The Ohio State University, 1974.

- HENRY NETTLING**, *Associate Vice President of Finance and Controller* (February 1964) B.S.B.A., The University of Akron, 1959.
- DANIEL M. NEWLAND**, *Assistant Vice President and Dean of Students* (August 1971) B.A., Coe College (Iowa); M.S., Indiana University at Bloomington; Ph.D., The University of Akron, 1987.
- CAROLE H. NEWMAN**, *Assistant Professor of Education* (1993) B.Ed., University of Miami; M.A., Ph.D., The University of Akron, 1987.
- ISADORE NEWMAN**, *Professor of Education; Associate Director of the Institute of Life-Span Development and Gerontology* (1971) B.A., University of Miami; M.A., New School for Social Research (New York); Ph.D., Southern Illinois University at Carbondale, 1971.
- ELAINE F. NICHOLS**, *Associate Dean of Undergraduate Programs in the College of Nursing; Associate Professor of Nursing* (1980) B.S.N., Western Reserve University; M.S.N., Case Western Reserve University; Ed.D., The University of Akron, 1987.
- CARL NIEKERK**, *Assistant Professor of Modern Languages* (1995) M.A., University of Groningen; Ph.D., Washington University, 1994.
- PETER H. NIEWIAROWSKI**, *Assistant Professor of Biology* (1995) B.S., Marlboro College; Ph.D., University of Pennsylvania, 1992.
- GLEN O. NJUS**, *Research Associate Professor in Institute for Biomedical Engineering Research* (November 1986) B.S., M.S., Ph.D., University of Iowa, 1985.
- ALLEN G. NOBLE**, *Professor of Geography and Planning* (1964) B.A., Syracuse University; M.A., University of Maryland at College Park; Ph.D., University of Illinois at Urbana, 1957.
- JUDITH A. NOBLE**, *Professor of Education; Department Chair of Curricular and Instructional Studies* (1970) B.S., M.A., Central Michigan University; Ph.D., Michigan State University, 1971.
- TIMOTHY S. NORFOLK**, *Associate Professor of Mathematical Sciences* (January 1984) B.Sc., Exeter University (England); M.S., The University of Akron; Ph.D., Kent State University, 1984.
- ELIZABETH R. NULL**, *Assistant Director of Development/Research* (February 1992) B.A., Kent State University; M.L.S., State University of New York at Buffalo, 1987.
- DAVID A. NYPAVER**, *Writer/Media Liaison* (1990) B.A., The University of Akron, 1982.
- PHYLLIS G. O'CONNOR**, *Assistant Dean of University Libraries; Assistant Professor of Bibliography; Head of Circulation* (1978) B.A., The University of Akron; M.L.S., Kent State University, 1992.
- JERRY C. OBIKWE**, *Assistant Professor of Mathematics* (Wayne College) (August 1993) B.S., M.S., Southern University A&M; Ph.D., Memphis State University, 1992.
- T. MOBIDO Ocran**, *Professor of Law* (1984) L.L.B., University of Ghana; M.L.I., Ph.D., University of Wisconsin, 1971.
- EMEKA O. OFOBKE**, *Associate Professor of Accounting* (1989) B.B.A., M.B.A., Western Illinois University; Ph.D., University of Oregon, 1984.
- GARY H. OLLER**, *Associate Professor of Classics* (1979) B.A., Dickinson College; Ph.D., University of Pennsylvania, 1977.
- GRACE E. OLMSTEAD**, *Assistant Director of the Student Assistance Center; Coordinator of Services for Students with Disabilities* (October 1977) B.A., Wilberforce University; M.Ed., Kent State University, 1972.
- DAVID H. OLSEN**, *Assistant Professor of Accounting* (1993) B.S., California State University at Fullerton; M.S., Brigham Young University; Ph.D., University of Arizona, 1993.
- CAROL A. OLSON**, *Associate Professor of Law* (1986) B.A., Washington College; M.A., M.Ed., University of Delaware; J.D., University of the Pacific, 1983.
- SUSAN J. OLSON**, *Associate Professor of Education* (1989) B.S., M.Ed., Indiana University of Pennsylvania; Ph.D., Pennsylvania State University, 1989.
- RUSSELL J. O'NEILL**, *Coordinator of Continuing Education and Program Development* (Wayne College) (January 1994) B.S.Ed., University of Dayton; M.S., St. Michael's College, 1976.
- F. SCOTT ORCUTT, JR.**, *Associate Professor of Biology* (1971) B.S., M.S., Ph.D., Cornell University, 1969.
- GAIL C. OSTERFIELD**, *Instructor in Nursing* (1994) B.S., Ursinus College; M.S.N., Vanderbilt University, 1992.
- BARBARA A. OSYK**, *Associate Professor of Management* (1989) A.A., Cuyahoga Community College; B.S.I.M., M.B.A., The University of Akron; Ph.D. Kent State University, 1991.
- DONALD W. OTT**, *Associate Professor of Biology* (1974) B.S., Southeastern Louisiana University; Ph.D., University of North Carolina at Chapel Hill, 1973.
- LEE A. OWENS**, *Head Football Coach* (January 1995) B.A., Bluffton College; M.A.A., Ashland College, 1981.
- MARC C. OZANICH**, *Associate Professor of Dance* (1973) A.A., Bakersfield College; B.A., University of California at Santa Barbara; M.A., University of California at Los Angeles, 1968.
- LYNNE M. PACHNOWSKI**, *Assistant Professor of Education* (1993) B.A., M.Ed., John Carroll University; Ph.D., Boston College, 1994.
- JOSEPH PADOVAN**, *Distinguished Professor of Mechanical Engineering; Distinguished Professor of Polymer Engineering* (1970) B.S.M.E., M.S.M.E., Ph.D., Polytechnic Institute of New York, 1969.
- KENNETH J. PAKENHAM**, *Associate Professor of English* (August 1980) B.A., Trinity College (Ireland); M.A., University of Essex (England); Ph.D., University of Pittsburgh, 1980.
- ARTHUR L. PALACAS**, *Professor of English* (1976) B.A., Harvard University; Ph.D., Indiana University at Bloomington, 1970.
- JUDITH A. PALAGALLO**, *Professor of Mathematical Sciences* (1978) B.S., Westminster College; M.S., Purdue University; Ph.D., Colorado State University, 1975.
- DARYL W. PALMER**, *Associate Professor of English* (August 1990) B.A., Washburn University of Topeka; M.A., Ph.D., University of Kansas, 1990.
- JOSEPH A. PALMISANO**, *Assistant Football Coach-Wide Receivers/Recruiting Coordinator* (January 1995) B.S., Iowa State University; M.S., 1987.
- ROLAND R. PAOLUCCI**, *Associate Professor of Music; Coordinator of Jazz Studies; Director of the Jazz Ensemble* (1978) B.S., State University of New York; M.A., The University of Akron, 1985.
- GERALD M. PARKER**, *Associate Director of Research Services and Sponsored Programs* (November 1989) B.A., The University of Akron; M.A., Kent State University, 1983.
- MANOUCHER PARVIN**, *Professor of Economics* (1978) B.S., University of Toledo; Ph.D., Columbia University, 1969.
- JAYPRAKASH G. PATANKAR**, *Professor of Management* (1978) B.S., Bombay University (India); M.S., Ph.D., Clemson University, 1978.
- GEORGIA K. PEEPLES**, *Professor of Music* (1983) B.M., Baylor University; M.A., University of North Carolina; D.M.A., University of Maryland, 1981.
- WOLFGANG PELZ**, *Professor of Mathematical Sciences* (1978) B.S., Rose-Hulman Institute of Technology; M.S., Ph.D. (Statistics), M.S. (Computer Science), Virginia Polytechnic Institute and State University, 1984.
- BRIAN F. PENDLETON**, *Professor of Sociology* (1978) B.A., University of Minnesota at Duluth; M.A., University of North Dakota; Ph.D., Iowa State University, 1977.
- SANDRA L. PEROSA**, *Associate Professor of Education* (1989) B.A., M.A., M.Ed., Ph.D., State University of New York at Buffalo, 1983.
- DAVID S. PERRY**, *Professor of Chemistry* (January 1987) B.Sc., Ph.D., University of Toronto, 1975.
- GWENDOLYN D. PERRY**, *Assistant Professor of Social Work* (1996) B.S.W., M.S.W., Temple University, 1987.
- JOSEPH D. PERRY**, *Assistant Professor of Home Economics and Family Ecology* (1994) B.S., Youngstown State University; M.Ed., Westminster College; Ph.D., Kent State University, 1977.
- JOHN H. PETERSON**, *Assistant Football Coach* (January 1995) B.S.Ed., The Ohio State University, 1991.
- JULIA C. PHILLIPS**, *Counseling Psychologist* (1994) B.A., M.A., Ph.D., The Ohio State University, 1992.
- JOHN J. PIGATTI**, *Assistant Men's Basketball Coach* (April 1995) B.S., University of Dayton; M.S., Creighton University, 1993.
- VICTOR E. PINHEIRO**, *Associate Professor of Physical Education* (1989) B.S., M.S., Jiwaji University; Ph.D., University of Pittsburgh, 1989.
- ESTEL M. PITTMAN**, *Internal Auditor* (June 1987) B.S., The University of Akron, 1984.
- PAULETTE K. POLLEY**, *Assistant Professor in Marketing* (1989) B.S., Howard University; M.B.A., Ph.D., Kent State University, 1992.
- VELMA E. POMRENKE**, *Professor of Social Science* (January 1978) B.A., University of Western Ontario; M.A., New York University; Ph.D., The University of Akron, 1979.
- GEORGE S. POPE**, *Associate Professor of Music* (1978) B.M.E., University of Tulsa; M.M., Northwestern University, 1975.
- ROBERT F. POPE, JR.**, *Professor of English* (1977) B.A., University of California at Berkeley; M.A., California State University, San Diego; M.F.A., University of Iowa, 1976.
- SUSAN M. POPE**, *Instructor in Accounting* (January 1992) B.S., Pennsylvania State University; M.B.A., The Ohio State University, 1978.
- JOHN A. POPPLESTONE**, *Professor of Psychology; Director of the Archives of the History of American Psychology* (1961) B.A., University of Michigan at Ann Arbor; M.A., Wayne State University; Ph.D., Washington University, 1958.
- THOMAS E. PRICE, JR.**, *Professor of Mathematical Sciences; Professor of Biomedical Engineering* (1976) B.S., M.S., Ph.D., University of Georgia, 1976.
- MINNIE C. PRITCHARD**, *Associate Dean of the Community and Technical College; Professor of Surveying and Construction Technology; Professor of Drafting Technology* (1971) B.S.C.E., M.S.Tech.Ed., The University of Akron, 1981.
- GEORGE E. PROUGH**, *Professor of Marketing* (1968) M.A., Michigan State University; D.B.A., Kent State University, 1977.
- CLAIRE J. PURDY**, *General Ledger Accountant* (June 1991) B.S., The University of Akron, 1982.
- JANET PURNELL**, *Executive Director of Minority Development* (January 1991) B.S.E., M.S., The University of Akron, 1971.
- HELEN K. QAMMAR**, *Assistant Professor of Chemical Engineering* (January 1989) B.S., Syracuse University; M.S., Ph.D., University of Virginia, 1986.
- ANTONIO R. QUESADA**, *Professor of Mathematical Sciences* (1984) M.S., Ph.D., University of Florida, 1978.
- THOMAS J. QUICK**, *Research Associate in Geology* (1983) A.S., B.S., M.S., The University of Akron, 1983.
- RODERIC P. QUIRK**, *Professor of Polymer Science; Department Chair of Polymer Science* (October 1983) B.S., Rensselaer Polytechnic Institute; M.S., Ph.D., University of Illinois, 1967.
- NEAL C. RABER**, *Associate Professor of Mathematical Sciences* (1972) B.S.Ed., Kent State University; M.S., Ph.D., The Ohio State University, 1972.
- GAURI S. RAI**, *Professor of Social Work* (1980) B.A., M.A.S., Kashi Vidyapeeth University; M.S.W., Saint Louis University; Ph.D., Rutgers University at New Brunswick, 1976.
- MARY C. RAINEY**, *Professor of Home Economics and Family Ecology* (1980) B.A., Saint Mary's College; M.A., Ph.D., Michigan State University, 1971.
- JONATHAN S. RAKICH**, *Distinguished Professor of Management and Health Services Administration; Director of the Center for Organizational Development* (1972) B.A., Oakland University; M.B.A., University of Michigan at Ann Arbor; Ph.D., St. Louis University, 1970.
- PENNY RAKOFF**, *Professor of Art* (1978) B.F.A., University of Michigan at Ann Arbor; M.F.A., Rochester Institute of Technology, 1976.
- HARRIDUTT RAMCHARRAN**, *Associate Professor of Finance* (1986) B.S., Mankato State College; M.A., Ph.D., State University of New York at Binghamton, 1978.
- SUSAN E. RAMLO**, *Assistant Professor of General Technology* (1994) B.S., Mount Union College; M.S., Miami University, 1986.
- CYNTHIA D. RAMSTHALER**, *Assistant Director of University Communications-Media Relations* (August 1984) B.A., Kent State University, 1978.
- ANDREW S. RANCIER**, *Associate Professor of Communication* (August 1991) B.A., M.A., Queens College; Ph.D. Kent State University, 1979.
- NICHOLAS RANSON**, *Associate Professor of English* (1973) B.A., M.A., Cambridge University (England); Ph.D., Case Western Reserve University, 1974.
- SUSAN RASOR-GREENHALGH**, *Associate Professor of Home Economics and Family Ecology* (1987) A.A., B.S., Morehead State University; M.S., University of Southern California, 1982.
- DARIUS RASTOMJI**, *Associate Professor of Computer Programming Technology* (1980) B.Comm., M.Comm., University of Poona; A.A.S., M.S.Ed., Ph.D., The University of Akron, 1987.
- JAMES S. RAY**, *Foundation Accountant* (October 1981) B.S., The University of Akron, 1980.
- DONNA JEAN RECTOR**, *Endowment Funds Accountant* (March 1976) B.S.B.A., Kent State University, 1962.
- NARENDER P. REDDY**, *Professor of Biomedical Engineering* (March 1981) B.E., Osmania University; M.S., University of Mississippi; Ph.D., Texas A&M University, 1974.

- DAVID A. REDLE**, *Associate Professor of Business Law* (January 1981) B.B.A., University of Notre Dame; M.B.A., J.D., The University of Akron, 1980.
- CHARLENE K. REED**, *Director of Planning and Analysis; Assistant to the President* (October 1982) B.A., M.Ed., The University of Akron, 1989.
- KAREN S. REED**, *Associate Professor of Nursing* (1989) B.S.N., Ohio University; M.N., University of Pittsburgh; Ph.D., University of North Carolina-Greensboro, 1988.
- DIANA C. REEP**, *Professor of English* (1980) B.S., M.A., Ph.D., University of Wisconsin at Milwaukee, 1979.
- ELIZABETH A. REILLY**, *Professor of Law* (1984) B.A., Princeton University; J.D., The University of Akron, 1978.
- MARK A. REIMAN**, *Strength and Conditioning Coach* (June 1991) B.A., College of Wooster; M.S., The University of Akron, 1982.
- MARIS I. RENICE**, *Assistant Professor of Theatre Arts* (1994) B.A., Cleveland State University; M.F.A., Tulane University of Louisiana, 1986.
- DARRELL H. RENEKER**, *Professor of Polymer Science* (1989) B.Sc., Iowa State University; M.Sc., Ph.D., University of Chicago, 1959.
- PAULA R. RENKER**, *Instructor in Nursing* (1986) B.S.N., The Ohio State University; M.S.N., The University of Akron, 1986; R.N.
- NIKOLA RESANOVIC**, *Associate Professor of Music* (1983) B.M., M.M., The University of Akron; D.M.A., Cleveland Institute of Music, 1981.
- JANET R. REUTER**, *Associate Professor of Education* (1975) B.S.Ed., M.Ed., Ohio University; Ph.D., University of Toledo, 1975.
- RICHARD S. RICE**, *Assistant Dean of the College of Engineering; Director of Cooperative Engineering Education; Assistant Professor of Coordination* (August 1984) B.S.B.A., Bowling Green State University, 1959.
- WILLIAM D. RICH**, *Associate Professor of Law* (August 1981) B.A., University of Rochester; J.D., University of Denver; L.L.M., Harvard University, 1986.
- DONNA B. RICHARDSON**, *Assistant Professor of Biomedical Engineering* (1994) B.S., University of Iowa; M.S., Ph.D., Duke University, 1991.
- RANDOLPH E. RICHARDSON**, *University Architect; Senior Director of Facilities Planning and Construction* (August 1985) B.A., Miami University, 1969.
- PAUL RICHERT**, *Law Librarian; Professor of Law* (July 1977) B.A., M.S., University of Illinois; J.D., Tulane University of Louisiana, 1977.
- HELEN W. RICHTER**, *Associate Professor of Chemistry* (1984) B.A., The Woman's College of Georgia; M.S., Ph.D., The Ohio State University, 1974.
- TRACY A. RILEY**, *Instructor in Nursing* (1992) B.S.N., Walsh College; M.S.N., Case Western Reserve University, 1992.
- PETER L. RINALDI**, *Professor of Chemistry; Director of the Molecular Spectroscopy Laboratory* (May 1987) B.S., Polytechnic Institute of New York; Ph.D., University of Illinois, 1978.
- DAVID RITCHEY**, *Associate Professor of Communication* (August 1990) B.A., Georgetown College; M.A., Ph.D., Louisiana State University, 1971.
- STANLEY E. RITTGERS**, *Professor of Biomedical Engineering; Director of the Institute for Biomedical Engineering Research* (1987) B.S., State University of New York at Buffalo; M.S., Ph.D., The Ohio State University, 1978.
- JANE F. ROBERTS**, *Associate Professor of Social Services Technology* (Wayne College) (1985) B.A., Gettysburg College; M.S., Case Western Reserve University, 1975.
- PATRICK S. ROBERTS**, *Director of the Annual Fund* (May 1993) B.S., The University of Akron, 1988.
- BENNIE P. ROBINSON**, *Assistant Professor of Bibliography* (March 1987) B.A., Tougaloo College; M.L.S., Atlanta University, 1967.
- DAVID J. ROBINSON**, *Professor of Electronic Technology* (June 1969) B.S.E.E., The University of Akron; M.S.E., Case Western Reserve University; J.D., The University of Akron, 1975.
- DAVID N. ROBINSON**, *Professor of Civil Engineering* (January 1983) B.Sc., Northern Arizona University; M.Sc., Ph.D., Brown University, 1966.
- GREGORY F. ROBINSON**, *Counseling Psychologist* (July 1994) B.S., M.A., Ph.D., The Ohio State University, 1992.
- EMILY A. ROCK**, *Associate Professor of Biology* (Wayne College) (1983) B.S., University of Richmond; M.S., The University of Akron, 1984.
- CHRISTOPHER M. ROGERS**, *Assistant Director of Admissions for Secondary School Relations* (May 1995) B.A., Willamette University, 1993.
- DAWN M. ROGERS**, *Assistant Director of Athletics* (1989) B.S., Ithaca College; M.S., University of Massachusetts, 1987.
- KAY ROGERS**, *Associate Director of Public Relations* (January 1994) A.A., Andrew College; B.S., University of Tennessee, 1961.
- STEPHANIE M. ROHAL**, *Budget Analyst* (1991) B.S., Case Western Reserve University; M.A., The University of Akron, 1993.
- STEPHEN P. ROOKE**, *Assistant Professor of Mechanical Engineering* (1991) B.S.M.E., Michigan Technological University; M.S.M.E., Ph.D., Purdue University, 1992.
- KATHLEEN M. ROSS-ALAOLMOLKI**, *Associate Professor of Nursing* (August 1990) B.S.N., College of Mount Saint Joseph; M.S.N., Ph.D., Case Western Reserve University, 1985.
- VICKI D. ROSTEDT**, *Assistant Professor of Social Science* (1994) B.A., B.S., M.B.A., Kent State University, 1983.
- MARY ANNE ROTHERMEL**, *Associate Professor of Management* (1984) B.S., M.B.A., The University of Akron; Ph.D., The Ohio State University, 1981.
- JEANNE-HELENE ROY**, *Assistant Professor of Modern Languages* (1995) B.A., University of Michigan; M.A., Cornell University, 1993.
- ROBERT E. RUESCHMAN**, *Assistant Director of Purchasing* (March 1978) B.B.A., Kent State University, 1968.
- PAMELA R. RUPERT**, *Director of Developmental Programs; Coordinator of College Reading; Adjunct Assistant Professor of Education; Coordinator of Reading Lab and Study Skills Center* (July 1978) B.S.Ed., Kent State University; M.S.Ed., Ph.D., The University of Akron, 1979.
- ROGER N. RYAN**, *Associate Vice President for Administrative Support Services; Adjunct Associate Professor of Home Economics and Family Ecology* (May 1976) B.S., University of Cincinnati; M.A., The University of Akron, 1984.
- TRINA RYAN**, *Administrative Analyst* (January 1978) B.A., The University of Tampa; M.A., The University of Akron, 1986.
- HELEN LENORE RYAN-RANSON**, *Professor of Modern Languages; Department Chair of Modern Languages* (1968) B.A., Ohio Wesleyan University; M.A. (Spanish), M.A. (French), D.M.L., Middlebury College, 1980.
- JAMES M. RYON**, *Associate Professor of Music* (1984) B.S., Yale University; B.M., M.M., The Juilliard School, 1978.
- ARJAN T. SADHWANI**, *Professor of Accounting* (1970) B.A., B.Com., M.Com., Bombay University; Ph.D., Michigan State University, 1971.
- CHERYL B. SADLER**, *Instructor in Nursing* (1989) B.S.N., University of Maryland; M.Ed., Howard University; M.S.N., Catholic University of America, 1976.
- JOHN P. SAHL**, *Associate Professor of Law* (August 1991) B.A., Boston College; J.D., Vermont Law School; L.L.M., Yale University, 1989.
- PRISCILLA K. SAKEZLES**, *Assistant Professor of Philosophy* (1995) B.A., M.A., University of South Florida; Ph.D., Florida State University, 1993.
- ATEF F. SALEEB**, *Professor of Civil Engineering* (1983) B.Sc., Cairo University; M.Sc., Ph.D., Purdue University, 1981.
- LINDA M. SALIGA**, *Assistant Professor of Mathematical Sciences* (1993) B.S.E., Missouri Western State College; M.S., Ph.D., University of Missouri-Rolla, 1993.
- RONALD L. SALISBURY**, *Associate Professor of Biology* (1982) A.B., Greensboro College; M.S., University of Richmond; Ph.D., Virginia Commonwealth University, 1979.
- RAYMOND E. SANDERS**, *Associate Professor of Psychology; Associate Director for Research in the Institute for Life-Span Development and Gerontology* (1969) B.A., M.A., Ph.D., University of Arizona, 1969.
- NEIL B. SAPIENZA**, *Associate Professor of Commercial Art* (1987) B.F.A., Ohio University; M.S., Brooks Institute at Santa Barbara, 1987.
- MOSTAFA H. SARHAN**, *Professor of Accounting; Department Chair of Accounting* (January 1983) B.C., Cairo University; M.B.A., Texas A&M University; Ph.D., University of Arkansas, 1983.
- SIMSEK SARIKELLE**, *Professor of Civil Engineering* (1967) B.S.C.E., Robert College; M.S.C.E., Ph.D., West Virginia University, 1966; P.E., Ohio, West Virginia.
- RITA S. SASLAW**, *Professor of Education; Department Chair of Educational Foundations and Leadership* (1975) B.S., M.A., Ph.D., Case Western Reserve University, 1971.
- IRA D. SASOWSKY**, *Assistant Professor of Geology* (1995) B.S., University of Delaware; M.S., Ph.D., Pennsylvania State University, 1992.
- MICHAEL SAVAGE**, *Professor of Mechanical Engineering* (1979) B.M.E., Manhattan College; M.S.M.E., Ph.D., Purdue University, 1969; P.E., Indiana, Ohio.
- ANNEMARIE SCARISBRICK-HAUSER**, *Associate Director of the Survey Research Center* (February 1988) B.Ed., National University; M.S., Purdue University; M.A., Ph.D., The University of Akron, 1991.
- RUDOLPH J. SCAVUZZO, JR.**, *Associate Dean of the College of Polymer Science and Polymer Engineering; Professor of Polymer Engineering; Professor of Mechanical Engineering* (1973) B.S.M.E., Lehigh University; M.S.M.E., Ph.D., University of Pittsburgh, 1962; P.E., Ohio.
- MARY G. SCHILLER**, *Professor of Music* (1982) B.M., University of North Carolina at Greensboro; M.M., D.M.A., The Ohio State University, 1979.
- VICTORIA M. SCHIRM**, *Associate Professor of Nursing* (1987) B.S., M.S., Penn State University; Ph.D., Case Western Reserve University, 1987.
- PHILLIP H. SCHMIDT**, *Professor of Mathematical Sciences* (1972) B.S., M.S., Ph.D., Purdue University, 1972.
- SUSAN M. SCHMIDT**, *Academic Project Leader* (July 1990) B.S., M.S., Purdue University, 1970.
- MAE N. SCHREIBER**, *Assistant Professor of Bibliography* (1989) B.S., The Ohio State University; M.L.S., Simmons College, 1988.
- WILLEANE V. SCHROCK**, *Assistant Professor of Nursing* (August 1981) B.S., Goshen College; M.S., Case Western Reserve University; M.A., Ph.D., The University of Akron, 1992; R.N.
- FREDERICK M. SCHULTZ**, *Professor of Education* (1969) B.S., M.S., Ph.D., Indiana University at Bloomington; B.A., The University of Akron, 1985.
- SUSAN J. SCHUNK**, *Instructor in Modern Languages* (1971) B.S.Ed., Indiana University of Pennsylvania; M.A., The Ohio State University, 1968.
- WILLIAM H. SEATON**, *Associate Dean of Fine and Applied Arts; Professor of Communicative Disorders* (1989) B.S., M.S., Ph.D., University of Illinois, 1976.
- ALLEN L. SEHN**, *Assistant Professor of Civil Engineering* (January 1990) B.S.C.E., M.S.C.E., South Dakota School of Mines and Technology; Ph.D., Virginia Polytechnic Institute and State University, 1990; P.E., Ohio, Virginia.
- ROBERT H. SEIPLE**, *Manager of Applied Research* (1984) B.A., Youngstown State University; M.A., The University of Akron, 1985.
- RICHARD H. SEIVERT**, *Director of Computer Services* (July 1981) B.S.Ed., University of North Dakota; M.B.A., The Ohio State University, 1970.
- GARY E. SELLERS**, *Associate Professor of Economics* (1976) B.A., Shippensburg State College; M.A., Ph.D., University of Cincinnati; J.D., The University of Akron, 1990.
- KENNETH A. SEPTARIC**, *Assistant Professor of Aerospace Studies* (1994) B.S., Bowling Green State University; M.A., Troy State University, 1990; Captain, Security Police Officer.
- JOHN S. SERAFINI**, *Associate Professor of Mechanical Engineering* (January 1982) B.A.E., M.A.E., Rensselaer Polytechnic Institute; Ph.D., Case Western Reserve University, 1962.
- MICHAEL D. SERMERSHEIM**, *Associate General Counsel; Director of Contract Administration; Industrial Safety Supervisor* (December 1976) B.A., J.D., The University of Akron, 1973.
- KIMBERLY S. SHAMSI**, *Coordinator of Career Services* (Wayne College) (August 1993) B.S., M.A., Bowling Green State University, 1992.
- JAMES L. SHANAHAN**, *Professor of Public Administration and Urban Studies; Director of the Center for Urban Studies* (1970) B.B.S., West Virginia State College; M.A., West Virginia University; Ph.D., Wayne State University, 1972.
- RICHARD L. SHANKLIN**, *Associate Professor of Music* (1982) B.S., Illinois State University; M.M.Ed., North Texas State University, 1973.
- ROBERT J. SHARDY, SR.**, *Director of the Engineering Computer Graphics Facility* (August 1984) B.S., The University of Akron, 1972.
- DOUGLAS V. SHAW**, *Associate Professor of Public Administration and Urban Studies* (1972) B.A., Lebanon Valley College; M.A., Brown University; Ph.D., University of Rochester, 1972.

- DANIEL M. SHEA**, *Assistant Professor of Political Science* (1993) B.A., State University of New York at Oswego; M.A., University of West Florida, 1986.
- ROBERT J. SHEDLARZ**, *Professor of Business Law* (1972) B.A., New York University; J.D., Notre Dame Law School, 1972.
- DANIEL B. SHEFFER**, *Associate Professor of Biology; Associate Professor of Biomedical Engineering; Department Chair of Biomedical Engineering; Director, Biostereometrics Laboratory* (July 1980) B.S., M.Ed., Northwestern State College; Ph.D., Texas A&M University, 1976.
- KARL A. SHILLIFF**, *Professor of Management* (1967) B.S.Ch.E., Pennsylvania State University; M.B.A., The University of Akron; Ph.D., Pennsylvania State University, 1971.
- RICHARD SHIREY**, *Professor of Music* (1967) B.M., Oberlin College; M.M., University of Illinois at Urbana, 1965.
- LARRY C. SHUBAT**, *Professor of Military Science* (July 1992) B.A., The University of California at Davis; M.S., The Ohio State University; Command and General Staff College, 1989; Major, Corps of Engineers, U.S. Army.
- F. N. SIBAI**, *Assistant Professor of Electrical Engineering* (January 1990) B.S., University of Texas-Austin; M.S., Ph.D., Texas A&M University, 1989.
- RAYMOND SIBBERSON**, *Professor of Respiratory Care* (1978) A.A.S., Cuyahoga Community College; B.S.Ed., M.S.T.E., The University of Akron, 1981.
- RUSSELL D. SIBERT**, *Assistant Secretary of the Board of Trustees* (February 1995) B.A., M.S.T.E., The University of Akron, 1989.
- SANDRA L. SIEDLECKI**, *Instructor in Nursing* (1993) B.S.N., M.S.N., The University of Akron, 1992.
- MARTIN H. SIEGEL**, *Associate Professor of Marketing and Sales Technology* (1972) B.F.A., M.A., Hunter College, 1965.
- BRIAN F. SIFFERLIN**, *Head Athletic Trainer* (January 1989) B.S., The Ohio State University; M.S., The University of Akron, 1989.
- S. MARC SILLING**, *Coordinator of Testing Services; Counseling Psychologist* (November 1981) B.A., Marietta College; M.A., Cleveland State University; Ph.D., Kent State University, 1981.
- KENNETH T. SILCOAC**, *Associate Professor of Communicative Disorders* (1971) B.S., M.Ed., Ph.D., Wayne State University, 1971.
- STANLEY B. SILVERMAN**, *Professor of Social Science* (January 1981) B.S., The Ohio State University, M.A., Middle Tennessee State University, 1973.
- FRANKLIN B. SIMMONS, III**, *Associate Professor of Management* (January 1982) B.A., M.A., Ph.D., University of Cincinnati; J.D., The University of Akron; L.L.M., Cleveland State University, 1991; C.P.M.
- PAUL D. SIMPSON**, *Assistant Professor of Construction Technology* (January 1983) B.S.C.E., M.S.C.E., The University of Akron, 1976; P.E., Ohio.
- SALLY KENNEDY SLOCUM**, *Associate Professor of English* (1966) B.A., Columbia College; M.A., Ph.D., University of Tennessee at Knoxville, 1968.
- JAMES R. SLOWIAK**, *Associate Professor of Theatre Arts* (1989) B.A., Macalester College; M.F.A., University of California-Irvine, 1985.
- CARYL KELLEY SMITH**, *Vice President for Student Affairs* (January 1994) B.A., Bethany College; M.S., Ph.D., Indiana University, 1973.
- DANIEL J. SMITH**, *Professor of Chemistry; Faculty Research Associate, IPS* (1977) B.S., Wisconsin State University; Ph.D., University of California at Berkeley, 1974.
- FORREST SMITH**, *Professor of Biology* (Wayne College) (1975) B.A., Hiram College; M.S., Purdue University; M.A., Kent State University, 1982.
- FREDERICH T. SMITH**, *Assistant Professor of Dance* (August 1990) B.A., University of Colorado; M.F.A., University of California at Irvine, 1990.
- LOIS M. SMITH**, *Supervisor of Sponsored Program Accounting* (December 1980) B.A., Walsh College, 1976.
- WALTER S. SMITH**, *Professor of Education* (1994) B.S., Cornell University; M.S.Ed., Ph.D., Indiana University, 1973.
- LYNN A. SMOLEN**, *Associate Professor of Education* (1981) B.A., American University; M.Ed., Ph.D., University of Florida, 1981.
- ANDREA F. SNELL**, *Assistant Professor of Psychology* (1994) B.A., Agnes Scott College; M.S., Georgia Institute of Technology; Ph.D., The University of Akron, 1995.
- LISA M. SNELL**, *Director of Community Services* (Wayne College) (August 1990) B.S., Western Kentucky University; M.B.A., The University of Akron, 1989.
- LARRY D. SNIDER**, *Professor of Music* (1977) B.S., Illinois State University; M.M.E., North Texas University; D.M.A., University of Illinois, 1983.
- HELEN F. SNOODGRASS**, *Instructor in Social Services Technology* (Wayne College) (1994) A.A.S., Wayne Community College; B.S.W., The University of Akron; M.S.W., The Ohio State University, 1988.
- DAVID A. SNOWBALL**, *Assistant Football Coach-Defensive Coordinator* (January 1995) B.S., Boston University, 1988.
- GLENN H. SNYDER**, *Professor of Community Services Technology* (1973) B.A.Ed., The University of Akron; M.Ed., Kent State University, 1972.
- JEANNETTE SOJOURNER**, *Assistant Professor of Computer Programming Technology* (1994) B.S., M.S., The University of Akron, 1989.
- NANCY M. SOMERICK**, *Professor of Communication* (1978) B.S.J., Ohio University; M.A.J., Kent State University; Ph.D., Ohio University, 1974.
- SANG-SUB SONG**, *Chief Engineer* (January 1985) B.S., M.S., Hanyang University; M.S., The City College of City University of New York; Ph.D., The University of Akron, 1990.
- MARK E. SOPPELAND**, *Professor of Art* (1976) B.F.A., University of Colorado; M.F.A., The Ohio State University, 1976.
- ROBERT J. SOVCHIK**, *Professor of Education* (1973) B.S., Kent State University; M.A., Cleveland State University; Ph.D., Kent State University, 1974.
- SUSAN D. SPEERS**, *Professor of Theatre Arts; Coordinator of Arts Administration* (1988) B.A., M.A., University of Houston; Ph.D., University of California at Santa Barbara, 1982.
- NORMA L. SPENCER**, *Associate Professor of Education* (1970) B.S.Ed., M.S., The University of Akron, 1970.
- JAMES C. SPERLING**, *Associate Professor of Political Science* (1988) B.A., University of California at Santa Barbara; M.A., Johns Hopkins University; C.Phil., Ph.D., University of California at Santa Barbara, 1986.
- GARY N. SPONSELLER**, *Project Leader of Academic User Services* (July 1977) B.A., B.A., The University of Akron, 1977.
- TIRUMALAI S. SRIVATSAN**, *Associate Professor of Mechanical Engineering* (1987) B.E., University of Bangalore; M.S., Ph.D., Georgia Institute of Technology, 1984.
- TOMAS D. STACY**, *Assistant Football Coach-Quarterbacks* (January 1995) B.A., Bowling Green State University, 1981.
- JOHN F. STAFFORD, JR.**, *Assistant Director of Student Financial Aid* (July 1979) B.S., Hampton Institute; M.Ed., Kent State University, 1979.
- DAVID B. STARK**, *Assistant Professor of Mathematical Sciences* (1981) B.A., Weber State College; M.S., J.D., Bingham Young University; Ph.D., University of Texas at Austin, 1981.
- VIRGIL STARKS, III**, *Assistant Dean of University College* (June 1991) B.A., Rhodes College; M.A., The University of Akron, 1985.
- SUSAN J. STEARNS**, *Associate Professor of Nursing* (1974) B.S.N., Saint John's College; M.S.N., Catholic University of America, 1963.
- P. STENER**, *Associate Professor of Mathematical Sciences* (1983) B.S., Grove City College; M.S., Clarion State College; M.P.H., Ph.D., University of Michigan, 1985.
- KAY E. STEPHAN**, *Associate Professor of Business and Office Technology* (Wayne College) (January 1979) B.S.Ed., Wittenberg; M.S., The University of Akron, 1978.
- CHARLES R. STEPHENS**, *Academic Adviser; Director of Minority Retention* (August 1979) B.A., Wilberforce University; M.Ed., Kent State University, 1970.
- EUGENE STEPHENS**, *Director of Purchasing* (October 1990) B.S.I.M., M.B.A., The University of Akron, 1981.
- RICHARD C. STEPHENS**, *Professor of Sociology* (1993) B.A., Louisiana State University; M.A., Ph.D., University of Wisconsin, 1971.
- WALLACE STERLING**, *Professor of Theatre Arts* (1966) B.A., M.A., University of Florida; Ph.D., Southern Illinois University at Carbondale, 1966.
- HARVEY L. STERNS**, *Professor of Psychology; Director of the Institute for Life-Span Development and Gerontology* (1971) B.A., Bard College; M.A., State University of New York at Buffalo; Ph.D., West Virginia University, 1971.
- SHERYL A. STEVENSON**, *Associate Professor of English* (1986) B.A., M.A., Ph.D., University of Maryland, 1986.
- GREGORY STEWART**, *Director of Admissions* (July 1994) B.S., University of Cincinnati; M.S., Miami University; Ph.D., Ohio University, 1993.
- JERRY N. STINER**, *Associate Professor of Biology; Department Chair of Biology* (1982) B.S., California Baptist College; Ph.D., University of California at Riverside, 1980.
- NANCY L. STOKES**, *Associate Professor of Bibliography; Music and Performing Arts Bibliographer* (November 1984) B.M.E., The University of Akron; M.M., Kent State University, 1986.
- JOSEPH W. STOLL**, *Supervisor, Laboratory for Cartographic and Spatial Analysis* (1989) B.S., Eastern Mennonite College; M.S., University of Wisconsin-Madison, 1986.
- ISABELLE A. STOMBAUGH**, *Associate Professor of Home Economics and Family Ecology* (1989) B.S., M.S., Ph.D., The Ohio State University, 1987.
- DONALD P. STORY**, *Associate Professor of Mathematical Sciences* (1976) B.A., M.A., Ph.D., University of Florida, 1976.
- RICHARD W. STRATTON**, *Associate Professor of Economics* (1978) B.A., Drew University; M.A., Ph.D., University of Connecticut, 1977.
- JOSEPH E. STRAW**, *Assistant Professor of Bibliography* (1994) B.S., M.L.S., M.A., Kent State University, 1994.
- CHARMAINE J. STREHARSKY**, *Director of Research Services and Sponsored Programs* (1964) A.A.S., B.S.T.E., M.S.T.E., Ph.D., The University of Akron, 1988.
- JAMES T. STRONG**, *Associate Professor of Marketing; Associate Professor of Fisher Institute of Professional Selling* (1989) B.A., Lafayette College; M.B.A., University of Toledo; Ph.D., Drexel University, 1990.
- DONALD E. STULL, JR.**, *Associate Professor of Sociology* (1986) B.A., M.A., Ph.D., University of Washington, 1986.
- FREDERICK JOHN STURM**, *Dean of the Community and Technical College; Professor of Business Management Technology; Professor of Hospitality Management* (August 1968) B.A., M.A., Ed.D., The University of Akron, 1979.
- PHILIP W. STUYVESANT**, *Associate Professor of Modern Languages* (1966) B.A., Thiel College; M.A., Ph.D., Case Western Reserve University, 1970.
- LINDA M. SUBICH**, *Professor of Psychology* (1981) B.S., University of Wisconsin at Milwaukee; M.A., Ph.D., The Ohio State University, 1981.
- LINDA ELLISON SUGARMAN**, *Assistant Professor of Accounting* (1970) B.B.A., M.S.Ed., Hofstra University, 1968; C.P.A., Ohio, New York.
- DENNIS K. SULLIVAN**, *Professor of Manufacturing Technology* (1977) B.S.B.A., M.S.T.E., The University of Akron, 1974.
- DANIEL J. SVYANTEK**, *Assistant Professor of Psychology* (1987) B.A., Indiana University; M.A., Ball State University; Ph.D., University of Houston, 1987.
- GERARD M. SWEENEY**, *Professor of English* (1971) B.S., Manhattan College; M.A., New York University; Ph.D., University of Wisconsin, 1971.
- MICHAEL G. SWEITZER**, *Head Volleyball Coach* (July 1991) B.A., The University of Akron, 1990.
- NICHOLAS D. SYLVESTER, III**, *Vice President for Research and University Development; Professor of Chemical Engineering* (June 1969) B.S., Ohio University; Ph.D., Carnegie-Mellon University, 1968.
- JOHN P. SZABO**, *Professor of Geology* (1975) B.S., University of Notre Dame; Ph.D., University of Iowa, 1975.
- LYNNE A. SZABO**, *Grant and Contract Accountant* (July 1979) B.S., A.A.B., The University of Akron, 1987.
- JAMES W. TAGGART**, *Professor of Business Management Technology* (1969) B.S., Youngstown State University; M.B.A., Pennsylvania State University; J.D., The University of Akron, 1974.
- HUI-QIAN TAN**, *Associate Professor of Mathematical Sciences; Associate Professor of Civil Engineering* (January 1986) B.A., Oberlin College; M.S., Ph.D., Kent State University, 1986.
- MICHAEL J. TASCNER**, *Professor of Chemistry* (1982) B.S., University of Wisconsin; Ph.D., Iowa State University, 1980.
- MARK B. TAUBIG**, *Associate Professor of Sociology* (1983) B.A., University of Wisconsin; M.A., Cornell University; Ph.D., State University of New York at Albany, 1979.

- BRUCE C. TAYLOR**, Associate Professor of Biomedical Engineering; Associate Professor of Electrical Engineering (1988) B.A., Hiram College; M.A., Ph.D., Kent State University, 1971.
- RICHARD W. TAYLOR**, Associate Professor of Management (1989) B.S., M.S., University of Florida; M.S., Ph.D., Georgia Institute of Technology, 1983.
- COLLEEN M. TEAGUE**, Instructor in Office Administration (Wayne College) (1994) A.D., Columbus Technical Institute; B.S., The University of Akron, 1991.
- LUCILLE M. TERRY**, Associate Professor of Home Economics and Family Ecology (1986) B.A., Wartburg College; M.S., Ph.D., University of North Carolina at Greensboro, 1978.
- CLAIRE A. TESSIER**, Assistant Professor of Chemistry (August 1990) B.S., University of Vermont; Ph.D., State University of New York at Buffalo, 1982.
- EDWIN THALL**, Professor of Chemistry (Wayne College) (1974) B.S., Pratt Institute; M.S., New Mexico Highlands University; Ph.D., The University of Akron, 1972.
- HELENE S. THALL**, Assistant Dean of Wayne College; Director of Student Services (Wayne College) (1980) B.S., M.S., Pratt Institute, 1969.
- JOHN THANOPOULOS**, Professor of Marketing; Director of International Business (January 1983) B.A., Athens Graduate School of Economics and Business Sciences; M.Sc., City University, London; Ph.D., University of Arkansas, 1983.
- FRANCIS B. THOMAS**, Associate Vice President for Information Services (December 1970) B.S., University of Cincinnati; M.A., Kent State University; Ph.D., The University of Akron, 1983.
- OLETHA THOMPSON**, Assistant Vice President for Student Affairs (March 1984) B.A., M.Ed., Howard University, 1973.
- STEPHEN J. THOMPSON**, Professor of Education (1973) B.S., University of Wisconsin at Oshkosh; M.A., University of Northern Colorado; Ph.D., Syracuse University, 1973.
- PHILIP G. THOMSON**, Associate Professor of Music (1994) B.M., University of Toronto; M.M., The Juilliard School, 1981.
- GEORGE E. TILDEN**, Assistant Director of Gardner Student Center (1980) B.A., The University of Akron, 1980.
- WILLIAM D. TIMMONS**, Assistant Professor of Biomedical Engineering (1993) B.S., M.S., Ph.D., Case Western Reserve University, 1992.
- DAVID M. TOKAR**, Assistant Professor of Psychology (1993) B.A., The University of Akron; M.A., Ph.D., Southern Illinois University at Carbondale, 1993.
- WILLIAM E. TORGLER, JR.**, Academic Adviser (1985) B.A., M.A., The University of Akron, 1990.
- ARLENE A. TOTH**, Instructor in English (1969) B.A., M.A., The University of Akron, 1969.
- J. GARY TRAVENY**, Director of New Student Orientation (1981) B.S., M.A., The University of Akron, 1980.
- JOHN H. TROCHE**, Associate Professor of Manufacturing Technology (1987) B.S., Purdue University; M.A., Kent State University, 1977.
- DAWN TROUDER**, Associate Provost for Academic Affairs; Professor of English (1980) B.A., M.A., Texas A&M University; Ph.D., Rice University, 1981.
- JANICE S. TROUTMAN-RAINS**, Assistant Professor of Art (August 1989) B.F.A., Kent State University, 1983.
- RALPH B. TUREK**, Professor of Music (1980) B.S., M.M., Duquesne University, D.M.A., University of Cincinnati, 1975.
- PETER B. TURK**, Professor of Marketing (1988) B.S., The Ohio State University; M.S., University of Illinois at Urbana; Ph.D., University of Wisconsin at Madison, 1977.
- DUDLEY B. TURNER**, Associate Professor of Communication (1986) B.A., Ashbury College; M.A., The University of Akron; Ph.D., Purdue University, 1988.
- KAREN B. TURNER**, Associate Professor of American Sign Language Interpreting and Transliterating Technology (October 1970) B.S., Kent State University; M.S.Ed., The University of Akron, 1974.
- MONTE E. TURNER**, Professor of Biology (1982) B.S., M.S., Brigham Young University; Ph.D., University of Georgia, 1982.
- TYRONE M. TURNING**, Dean of Wayne College; Associate Professor of Speech (Wayne College) (July 1980) B.A., Southern Illinois University; M.A., Ed.D., Northern Illinois University, 1974.
- RAMESH VAKAMUDI**, Facilities Planner (1983) B.A., Jawaharal Nehru Technical University; M.A., The University of Akron, 1985.
- SHERMAN D. VANDER ARK**, Professor of Music (1973) A.B., Calvin College; M.A., Ph.D., The Ohio State University, 1970.
- ROBERT J. VEILLETTE**, Associate Professor of Electrical Engineering (August 1990) B.S.E.E., Virginia Polytechnic Institute and State University; M.S.E.E., Clemson University; Ph.D., University of Illinois at Urbana, 1990.
- VICTOR VELEZ**, Assistant Director of Placement Services (July 1977) B.A., M.A., University of Tampa, 1977.
- SUSANNE VENDLINSKI**, Instructor in Nursing (1994) B.S.N., St. Joseph's College; M.S.N., The University of Akron, 1992.
- MARY C. VERSTRAETE**, Associate Professor of Biomedical Engineering (1988) B.S., M.S., Ph.D., Michigan State University, 1988.
- WILLIAM H. VIAU**, Director of Employee Relations; Appointing Authority (1994) B.S., Miami University; M.S., Cleveland State University; J.D., The University of Akron, 1994.
- TIMOTHY R. VIERHELLER**, Associate Professor of Physics (Wayne College) (1987) B.S., Marietta College; M.S., Ohio University; Ph.D., The University of Akron, 1994.
- BINDIGANAVALE S. VIJAYARAMAN**, Associate Professor of Management (1989) B.Sc., M.Sc., Bangalore University; M.S.D.S., Ph.D., Georgia State University, 1987.
- MARK S. VIOLA**, Assistant Professor of Electrical Engineering (1989) B.S., M.S., Ph.D., Michigan State University, 1988.
- RONALD E. VIOLA**, Professor of Chemistry (1984) B.S., Fordham University; M.S., Ph.D., Pennsylvania State University, 1976.
- ERNST D. VON MEERWALL**, Distinguished Professor of Physics; Distinguished Professor of Chemistry; Faculty Research Associate, IPS (1971) B.S., M.S., Northern Illinois University; Ph.D., Northwestern University, 1970.
- VLADA VUKADINOVIC**, Associate Professor of Art (1983) Assoc., Cuyahoga Community College; B.F.A., Cleveland State University; M.F.A., Kent State University, 1982.
- DIANE VUKOVICH**, Coordinator of Basic Mathematics; Coordinator of Developmental Chemistry; Assistant Director of Developmental Programs (1976) B.S., Youngstown State University; M.Ed., Kent State University; Ph.D., The University of Akron, 1975.
- THOMAS J. VUKOVICH**, Associate Vice President for Student Affairs; Coordinator of Enrollment Services (July 1972) B.S., Ohio Northern University; M.Ed., Ph.D., Kent State University, 1982.
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- JOHN R. WALKER**, Grants Accountant (March 1978) B.S., M.A., The University of Akron, 1991.
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- JOSEPH M. WALTON**, Executive Assistant to the President; Professor of Education (1970) B.S.Ed., University of Cincinnati; M.Ed., Xavier University; Ph.D., The Ohio State University, 1970.
- MARY KATHERINE WARNER**, Aquatics Program Director (January 1989) B.A., M.A., The University of Akron, 1989.
- DAVID G. WASIK**, Assistant Director of Computer Services for Administrative Systems and Programming (June 1973) B.S., The University of Akron, 1973.
- MARILYN R. WATERS**, Assistant Director of the Alumni Association (July 1993) B.A., The University of Akron, 1987.
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- MYRA J. WEAKLAND**, Assistant Director of Graduate Programs in Business (October 1993) B.A., M.B.A., The University of Akron, 1990.
- ADELE A. WEBB**, Associate Professor of Nursing (1985) B.S.N., The University of Akron; M.S.N., The Ohio State University; Ph.D., Wayne State University, 1989.
- DONNA S. WEBB**, Professor of Art (1981) B.F.A., Eastern Michigan University; M.F.A., University of Michigan, 1971.
- THOMAS DEWITT WEBB**, Professor of Art (1970) B.F.A., M.F.A., University of Michigan at Ann Arbor, 1970.
- DEBORAH S. WEBER**, Associate Professor of Social Sciences; Chair of Associate Studies Division (1982) B.A., Denison University; M.A., The Ohio State University, 1972.
- STEPHEN C. WEEKS**, Assistant Professor of Biology (1994) B.A., M.A., University of California; Ph.D., Rutgers University, 1991.
- MARCIA E. WEIDKNECHT**, Instructor in Polymer Science (August 1989) B.S., University of New Hampshire, 1971.
- PAUL B. WEINSTEIN**, Assistant Professor of History (Wayne College) (1992) B.A., Miami University; M.A., Case Western Reserve University, 1974.
- DAVID M. WEISS**, Professor of Education; Department Chair of Counseling and Special Education (1967) B.A., Lorain College; M.Ed., Ohio University; Ph.D., The Ohio State University, 1967.
- JOHN T. WELCH, JR.**, Associate Professor of Electrical Engineering (1973) B.S., M.S., Ph.D., North Carolina State University at Raleigh, 1964.
- CHRYS WESDEMOTIS**, Associate Professor of Chemistry (1989) B.S., M.S., Ph.D., Technical University of Berlin, 1979.
- CLIFFORD T. WEST, JR.**, Assistant Professor of Management (1990) B.A., University of California-San Diego; M.B.A., Notre Dame College; Ph.D., Indiana University, 1992.
- JAMES L. WHITE**, Professor of Polymer Engineering; Department Chair of Polymer Engineering; Director of the Institute of Polymer Engineering (July 1983) B.S.Ch.E., Polytechnic Institute of Brooklyn; M.S.Ch.E., Ph.D., University of Delaware, 1965.
- SYLVIA E. WHITE**, Assistant Professor of Communication (1993) B.A., University of Connecticut; M.A., Ph.D., The Ohio State University, 1982.
- NANCY E. WIAND**, Instructor in Nursing (1994) B.S.N., University of Pittsburgh; M.S.N., The University of Akron, 1993.
- JOHN WIANDT**, Associate Controller (July 1967) B.S.Bus.Ed., Kent State University, 1965.
- RICHARD A. WIGGINS**, Network Project Leader (May 1988) B.S., The University of Akron, 1980.
- JACQUELINE E. WILBANKS**, Certification Coordinator in the College of Education (January 1995) B.S., M.S., Kent State University; Ph.D., The University of Akron, 1994.
- ANNETTE R. WILKINSON**, Instructor in Nursing (1994) B.S.N., M.S.N., The University of Akron, 1983.
- DELMUS E. WILLIAMS**, Dean of University Libraries; Professor of Bibliography (December 1991) B.S., University of Richmond; M.S.L.S., Kentucky State University; Ph.D., University of North Carolina at Chapel Hill, 1985.
- JOHN D. WILLIAMS**, Assistant Dean and Director of Graduate Business Programs; Professor of Finance (1969) B.S., Westminster College; M.B.A., D.B.A., Kent State University, 1971.
- MARY B. WILLIAMS**, Associate Professor of Office Administration (1989) B.S., M.S., Memphis State University, 1977.
- MICHAEL A. WILLIAMS**, Assistant Football Coach-Linebacker (February 1995) B.S., Iowa State University, 1977.
- MICHAEL M. WILLIAMS**, Professor of General Technology (1982) B.S., Bowling Green State University; M.S., University of Wisconsin at Milwaukee, 1973.
- MAX S. WILLIS, JR.**, Professor of Chemical Engineering; Professor of Biomedical Engineering; Associate Dean for Research and Graduate Studies in the College of Engineering (1968) B.S.Ch.E., Pennsylvania State University; M.S.Ch.E., Ph.D., Iowa State University of Science and Technology, 1962.
- G. EDWIN WILSON, JR.**, Professor of Chemistry; Department Chair of Chemistry (1984) B.S., Massachusetts Institute of Technology; Ph.D., University of Illinois, 1964.
- JOSEPH M. WILSON**, Instructor in Microprocessor Service Technology (Wayne College) (August 1990) A.A.S., B.S., Southern Illinois University at Carbondale, 1987.
- LOUIS R. WILSON, III**, Academic Adviser (Wayne College) (1992) B.A., The Ohio State University; M.A., Kent State University, 1992.

- NANCY M. WINEMAN**, *Professor of Nursing; Director of Doctoral Programs* (August 1990) B.A., Marymount Manhattan College; M.S.N., Yale University; Ph.D., University of Rochester, 1988.
- NIKKI W. WINGERSON**, *Assistant Professor of Social Work; Field Coordinator in Social Work* (January 1987) B.A., College of William & Mary; M.S.W., Smith College; Ph.D., University of Southern California, 1983.
- BERNARD S. WINICK**, *Associate Professor of Business Law* (1979) B.S.B.A., The Ohio State University; J.D., The University of Akron, 1964.
- PAUL B. WINTERS**, *Assistant Head Football Coach; Offensive Coordinator* (January 1995) B.S., M.S., The University of Akron, 1984.
- DAVID D. WITT**, *Professor of Home Economics and Family Ecology* (1983) B.A., M.A., Ph.D., Texas Tech University, 1983.
- ANN E. WOODLEY**, *Associate Professor of Law* (1988) B.A., University of Arizona; J.D., Arizona State University, 1981.
- DAVID W. WOODRUFF**, *Instructor in Nursing* (1993) B.S.N., M.S.N., Kent State University, 1993.
- DOUGLAS B. WOODS**, *Assistant Professor of Business Management Technology* (Wayne College) (1991) B.S., Ohio Northern University; M.A., Case Western Reserve University, 1984.
- STEPHANIE J. WOODS**, *Instructor in Nursing* (1987) B.S.N., Edinboro State College; M.S.N., Edinboro University, 1986.
- GAYLE J. WORKMAN**, *Assistant Professor of Education* (1995) B.A., Bowling Green State University; M.S., Slippery Rock State College, 1991.
- DENISE F. WRAY**, *Associate Professor of Communicative Disorders* (1980) B.A., M.A., Ph.D., The University of Akron, 1985.
- JOHN R. WRAY**, *Treasurer* (January 1990) B.S., J.D., The University of Akron, 1979.
- PAUL J. WRIGHT**, *Assistant Cross Country/Track Coach; Instructor in Physical Education* (January 1991) B.S., The University of Akron, 1990.
- CHRISTINE A. WYND**, *Associate Professor of Nursing; Director of Nursing Research* (January 1995) B.S., St. John College; M.S., The Ohio State University; Ph.D., Case Western Reserve University, 1989.
- CHARLES M. YATES**, *Director of Sports Information* (January 1990) B.S., Ohio University; M.A., The Ohio State University, 1978.
- HUI-CHU YING**, *Associate Professor of Art* (1989) B.A., San Jose State University; M.F.A., West Texas State University, 1987.
- WALTER H. YODER, JR.**, *Professor of Education; Director of Educational Field Experience* (1971) B.A., Tufts University; M.A., New York University; Ed.D., Indiana University at Bloomington, 1971.
- GERALD W. YOUNG**, *Professor of Mathematical Sciences; Coordinator of Applied Mathematics; Professor of Mechanical Engineering* (1985) B.S., The University of Akron; Ph.D., Northwestern University, 1985.
- WILEY J. YOUNGS**, *Professor of Chemistry* (August 1990) B.A., State University of New York at Albany; Ph.D., State University of New York at Buffalo, 1980.
- LAVERNE C. YOUSEY**, *Professor of Respiratory Care* (1976) B.A., Goshen College; M.S.T.E., The University of Akron, 1979.
- EDWARD A. ZADROZNY, JR.**, *Associate Professor of Music* (1977) B.M.E., The Ohio State University; M.M., University of Illinois, 1975.
- MARIA ZANETTA**, *Assistant Professor of Modern Languages* (1995) B.A., National School of Fine Arts; M.A., Ph.D., The Ohio State University, 1994.
- JOHN J. ZARSKI**, *Professor of Education; Director of the Clinic for Child Study and Family Therapy*. (1985) B.S., Bloomsburg State College; M.A., University of Maryland; Ph.D., Ohio University, 1975.
- BERNARD F. ZAUCHA**, *Instructor in Accounting* (1990) B.S., M.B.A., The University of Akron, 1972.
- DONALD A. ZIMMERMAN**, *Associate Professor of Marketing and Sales Technology* (1973) B.S.B.A., Defiance College; M.B.A., University of Pennsylvania, 1968.
- TAMARA L. ZURAKOWSKI**, *Assistant Professor of Nursing* (1994) B.S., M.A., New York University; Ph.D., Case Western Reserve University, 1990.

## Full-Time Teaching Faculty

(by College, School, and Department and the University Library)

### September 1995

#### Community and Technical College

##### Division of Allied Health Technology

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**PROFESSORS:** Dorothy C. Moses, Raymond Sibberson.

**INSTRUCTOR:** Anthony Charley, Jr., Rebecca L. Gibson.

##### Division of Associate Studies

**CHAIR:** Associate Professor Deborah S. Weber.

**PROFESSORS:** Anna M. Barnum, George L. Disabato, Michael J. Jalbert, Laura J. Johnson, Wendell A. Johnson, Rose A. Kleidon, Velma E. Pomrenke, Stanley B. Silverman.

**ASSOCIATE PROFESSORS:** Michael S. Bennett, Stanley R. Bruns, Richard W. Haire, Neil Sapienza.

**ASSISTANT PROFESSORS:** Kimetris N. Baltrip, Vicki D. Rostedt.

**INSTRUCTOR:** John W. Morrison, II.

##### Division of Business Technology

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**PROFESSORS:** Mary H. Dee, Janice L. Eley, Carol C. Gigliotti, Lawrence G. Golden, George J. Makar, Frederick J. Sturm, James W. Taggart, Martha W. Vye.

**ASSOCIATE PROFESSORS:** Richard W. Alford, John R. Cole, Russell K. Davis, III, Jo Ann Garver, Arthur V. George, Christine R. Gerbig, Augustus L. Harper, Gwendolyn Jones, Donald Laconi, Elizabeth A. Lariviere, Richard H. Lewandowski, Rebecca S. Marsh, Rebecca L. McCollum, Darius Rastomjij, Martin H. Siegel, Mary B. Williams, Donald A. Zimmerman.

**ASSISTANT PROFESSOR:** Jeannette Sojourner.

**INSTRUCTORS:** Karen E. Boughton, Colleen M. Teague.

##### Division of Engineering and Science Technology

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**ASSOCIATE PROFESSORS:** Harold Belofsky, James L. Brechbill, John W. Edgerton, James D. Frampton, Lionel D. Haizlip, Paul R. John, Wyatt Kilgallin, Minnie C. Pritchard, John H. Troche.

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##### Division of Public Service Technology

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**ASSISTANT PROFESSORS:** Randall J. Mitchell, Peter H. Niewiarowski, Darlene G. Walro, Stephen C. Weeks.

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### Chemistry

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**PROFESSORS:** Kim C. Calvo, Harry T. Chu, Roger B. Creel, Stephen D. Darling, James K. Hardy, H. James Harwood, Peter N. Henriksen, II, William G. Kofron, Gerald F. Koser, Edward C. Lim, Donald McIntyre, David S. Perry, Peter L. Rinaldi, Daniel J. Smith, Michael J. Taschner, Ronald E. Viola, Wiley J. Youngs.

**ASSOCIATE PROFESSORS:** Philip R. Baldwin, John E. Frederick, Robert R. Mallik, Helen W. Richter, Chrys Wesdemiotis.

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### Classics

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**ASSISTANT PROFESSOR:** Jutta T. Bendremer.

**INSTRUCTORS:** Debra L. Deane, Barbara R. Kimyon, Alice MacDonald, Martha McNamara, Arlene A. Toth.

### Geography and Planning

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**ASSISTANT PROFESSORS:** Cheryl Elman, Rebecca J. Erickson.

**College of Engineering**

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**ASSISTANT PROFESSORS:** Kathy L. Fullerton, Helen K. Qammar.

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**CHAIR:** Professor Benjamin T. F. Chung.  
**DISTINGUISHED PROFESSOR:** Joseph Padovan.  
**PROFESSORS:** Celal Batur, Minel J. Braun, Fred KatpChung Choy, Mamerto L. Chu, Jr., Azmi Kaya, Lala B. Krishna, Brian P. Leonard, Eberhard A. Meinecke, Michael Savage, Rudolph J. Scavuzzo, Jr., Gerald W. Young.  
**ASSOCIATE PROFESSORS:** Philip R. Baldwin, Chien-Chung Chan, Jerry E. Drummond, Richard J. Gross, Samuel G. Kelly, III, Paul C. Lam, Yueh-Jaw A. Lin, John S. Serafini, Tirumalai S. Srivatsan.  
**ASSISTANT PROFESSORS:** Ted A. Conway, Scott J. Forbes, Steven P. Rooke.

**College of Education**

**Counseling and Special Education**

**CHAIR:** Professor David M. Weis.  
**PROFESSORS:** Dale Coons, Bridgie A. Ford, Theodore L. Gloeckler, William E. Nemeck, Joseph M. Walton, John J. Zarski.  
**ASSOCIATE PROFESSORS:** James Austin, Alice E. Christie, Sandra L. Perosa.  
**ASSISTANT PROFESSORS:** Patricia L. Edwards, Matthew J. McTaggart, Patricia E. Parr.

**Curricular and Instructional Studies**

**CHAIR:** Professor Judith A. Noble  
**PROFESSORS:** Larry G. Bradley, Susan J. Daniels, Peggy G. Elliott, Harold M. Foster, Loren L. Hoch, William E. Klingele, LaVerne J. Meconi, Robert Sovchik, Walter S. Smith, Stephen J. Thompson, Walter H. Yoder.  
**ASSOCIATE PROFESSORS:** Susan G. Colville-Hall, Robert K. Eley, Bill J. Frye, Violet E. Leathers, Barbara G. Moss, Susan J. Olson, Janet R. Reuter, Lynn A. Smolen, Norma L. Spencer.  
**ASSISTANT PROFESSORS:** Fred M. Carr, Julia A. Lindsey, Carole H. Newman, Lynne M. Pachnowski.

**Educational Foundations and Leadership**

**CHAIR:** Professor Rita S. Saslaw.  
**PROFESSORS:** M. Kay Alderman, Ralph Darr, Jr., Charles M. Dye, John J. Hirschbuhl, Edward B. Lasher, Isadore Newman, Frederick M. Schulz.  
**ASSOCIATE PROFESSORS:** Reene A. Alley, Robert A. Dubick, James T. Hardy, Suzanne C. MacDonald, Paul Schutz.  
**ASSISTANT PROFESSORS:** Dianne A. Brown-Wright, Fred M. Carr, Huey-Li Li, Susan N. Kushner, Ronald C. McClendon.

**Physical Education and Health Education**

**CHAIR:** Associate Professor Doris Marino.  
**PROFESSORS:** Bruce L. Hollering, Mary J. MacCracken.  
**ASSOCIATE PROFESSORS:** Davison Munodawafa, Victor E. Pinheiro.  
**ASSISTANT PROFESSORS:** Sean Cai, Gayle J. Workman, Thomas A. Eidson.

**College of Business Administration**

**Accountancy**

**CHAIR:** Professor Mostafa H. Sarhan.  
**PROFESSORS:** Gary B. Frank, Il-Woon Kim, Dennis L. Kimmell, Roberta P. Marquette, Charles K. Moore, Jr., Arjan T. Sadhwani.  
**ASSOCIATE PROFESSORS:** Allen M. Cabral, Thomas G. Calderon, James L. Cress, James R. Emore, Darlene Kausch, Sharon L. Kimmell, Alvin H. Lieberman, Emeka O. Ofobike.  
**ASSISTANT PROFESSORS:** Onker Basu, Edward J. Conrad, David H. Olsen, Linda Sugarman.  
**INSTRUCTORS:** Susan M. Pope, Bernard F. Zaucha.

**Finance**

**CHAIR:** Professor Ronald Kudla.  
**PROFESSORS:** David R. Durst, James E. Inman, Douglas R. Kahl, Michael P. Litka, Robert J. Shedlarz, John D. Williams.  
**ASSOCIATE PROFESSORS:** Manuel L. Jose, Karen E. Lahey, Harridutt Ramcharran, David A. Redle, Bernard S. Winick.  
**ASSISTANT PROFESSORS:** Allen S. Anderson, Francis E. Canda.  
**INSTRUCTOR:** Angela M. Walker.

**Management**

**CHAIR:** Professor Gary E. Meek.  
**DISTINGUISHED PROFESSOR:** Jonathon S. Rakich.  
**PROFESSORS:** Kenneth E. Aupperle, Kenneth A. Dunning, Stephen F. Hallam, John E. Hebert, Keith A. Klafehn, Alan G. Krigline, Paul A. Kuzdrall, Jayprakash G. Patankar, Karl A. Shilliff.  
**ASSOCIATE PROFESSORS:** James J. Divoky, Robert A. Figler, Susan C. Hanlon, Avis L. Johnson, David G. Meyer, Barbara A. Osyk, Mary A. Rothermel, Franklin B. Simmons III, Richard W. Taylor, Bindiganavale S. Vijayaraman.  
**ASSISTANT PROFESSOR:** Clifford T. West, Jr.

**Marketing**

**CHAIR:** Professor Dale M. Lewison.  
**PROFESSORS:** Michael F. d'Amico, Jon M. Hawes, Donald G. Howard, Kenneth E. Mast, George E. Prough, John Thanopoulos, Peter B. Turk.  
**ASSOCIATE PROFESSORS:** Jeffrey C. Dilts, Douglas R. Hausknecht, James T. Strong.  
**ASSISTANT PROFESSOR:** Paulette K. Polley.  
**INSTRUCTOR:** Craig M. Christensen.

**College of Fine and Applied Arts**

**Art**

**DIRECTOR:** Associate Professor Christina DePaul.  
**PROFESSORS:** Andrew Borowiec, Earl L. Ertman, Donald E. Harvey, Dennis A. Kleidon, Penny Rakoff, Mark E. Soppeland, Donna S. Webb, Thomas D. Webb.  
**ASSOCIATE PROFESSORS:** George Danhires, Tyrone Geter, Gale Golembeski, Robert J. Huff, James V. Lenavitt, Christopher P. Meyer, Vlada Vukadinovic, Hui-Chu Ying.  
**ASSISTANT PROFESSORS:** Christopher Hoot, Edward J. Laughner, Harry Murutes, Janice S. Troutman-Rains.

**Communication**

**DIRECTOR:** Professor John D. Bee.  
**PROFESSORS:** Kathleen L. Endres, David L. Jamison, Linda L. Moore, Nancy M. Somerick.  
**ASSOCIATE PROFESSORS:** Richard E. Caplan, Gabriel F. Giral, William D. Harpine, Therese L. Lueck, Thomas T. Miles, Andrew S. Rancer, Robert D. Ritchey, Dudley B. Turner.  
**ASSISTANT PROFESSORS:** Kelly M. Julian, Sylvia E. White.

**Communicative Disorders**

**DIRECTOR:** Associate Professor James M. Lynn.  
**PROFESSORS:** Jean L. Blosser, Roberta DePompei, Carol A. Flexer, Donald E. Hall, Sharon A. Lesner, William H. Seaton.  
**ASSOCIATE PROFESSORS:** Karyn Bobkoff Katz, William T. Brandy, Yvonne M. Gillette, Kenneth T. Siloac, Denise F. Wray.  
**ASSISTANT PROFESSOR:** Mona L. Klingler.

**Dance**

**DIRECTOR:** Associate Professor Lucinda Lavelli  
**PROFESSOR:** Jerry J. Burr.  
**ASSOCIATE PROFESSOR:** Marc C. Ozanich.  
**ASSISTANT PROFESSORS:** Kathleen M. Davis, Frederich T. Smith.

**Home Economics and Family Ecology**

**DIRECTOR:** Professor Virginia J. Fleming.  
**PROFESSORS:** Tomasita M. Chandler, Helen K. Cleminshaw, Virginia L. Gunn, Barbara Heinzerling, Roberta S. Hurley, Mary C. Rainey, David D. Witt.  
**ASSOCIATE PROFESSORS:** Carolyn A. Albanese, Donna Gaboury, Jean D. Hines, Susan Rasor-Greenhalgh, Isabelle A. Stombaugh, Lucille B. Terry.  
**ASSISTANT PROFESSORS:** Nancy L. Jacobs, Deborah D. Marino, Joseph D. Perry.  
**INSTRUCTOR:** Elise Krigline.

**Music**

**DIRECTOR:** Professor Samuel Gordon.  
**PROFESSORS:** Alfred Anderson, David S. Bernstein, Clifford S. Billions, Alan Bodman, Lyle Dye, Jr., Michael P. Haber, DuWayne H. Hansen, Robert Jorgensen, Barbara J. MacGregor, Georgia K. Peeples, Mary G. Schiller, Richard N. Shirey, Larry D. Snider, Ralph B. Turek, Sherman D. Vander Ark.  
**ASSOCIATE PROFESSORS:** Tana F. Alexander, Stephen Aron, Harry L. Davidson, Jr., Michael R. Golemo, William K. Guegold, Virgil Hicks, William G. Hoyt, Jr., Scott A. Johnston, Tucker R. Jolly, Roland R. Paolucci, George S. Pope, Nikola Resanovic, James Ryon, Richard L. Shanklin, Philip G. Thomson, Edward A. Zadrozny, Jr.  
**ASSISTANT PROFESSORS:** Rebecca A. Dawson, Nancy E. Lineburgh.

**Social Work**

**DIRECTOR:** Professor Marvin D. Feit.  
**PROFESSORS:** Virginia L. Fitch, Gauri S. Rai.  
**ASSOCIATE PROFESSOR:** Geraldine Faria.  
**ASSISTANT PROFESSORS:** James E. King, Gwendolyn D. Perry, Nikki W. Wingerson.

**Theatre Arts**

**INTERIM DIRECTOR:** Professor Mark S. Auburn.  
**PROFESSORS:** Lyle Dye, Jr., Adel A. Migid-Hamzza, Susan D. Speers, Wallace Sterling.  
**ASSOCIATE PROFESSORS:** Paul A. Daum, James R. Slowiak.  
**ASSISTANT PROFESSOR:** Maris I. Rence.

**College of Nursing**

**DEAN:** Professor Velma Ruth Gray.  
**PROFESSORS:** Dolores A. Bower, Linda G. Linc, Nancy M. Wineman.  
**ASSOCIATE PROFESSORS:** Janis M. Campbell, Jo Ann H. Collier, Dorothy M. Dobrindt, Janne R. Dunham, Phyllis A. Fitzgerald, Kristine M. Gill, Betty C. Kinion, Mary Helen Kreidler, Joanne M. Marchione, Elaine F. Nichols, Karen S. Reed, Kathleen M. Ross-Alaolmolki, Victoria Schirm, Susan J. Stearns, Adele A. Webb, Christine A. Wynd.  
**ASSISTANT PROFESSORS:** Joan E. Baumgardner, Cheryl L. Buchanan, Therese M. Dowd, Cathy J. Galloway, Willeane V. Schrock, Temara L. Zurakowski.  
**INSTRUCTORS:** Rose A. Beeson, Aris Beoglos, Ruth E. Carlson, Helen C. Dannemiller, Elaine M. Fisher, Susan S. Gerberich, Doreen M. Good, Alison K. Harrigan, Katharine Y. Kolcaba, Christine B. McCalam, Mary E. Meeker, Rebecca L. Mitchell, Gail C. Osterfield, Paula R. Renker, Tracy A. Riley, Cheryl B. Sadler, Sandra L. Siedlecki, Susanne Vendinski, Nancy Wiand, Annette R. Wilkinson, David W. Woodruff, Stephanie J. Woods.

**College of Polymer Science and Polymer Engineering**

**Polymer Science**

**CHAIR:** Professor Roderic P. Quirk  
**DISTINGUISHED PROFESSORS:** Frank W. Harris, Joseph P. Kennedy.  
**PROFESSORS:** Steven Z. D. Cheng, Ronald K. Eby, Purushottam Das Gujrati, Gary R. Harned, H. James Harwood, Frank N. Kelley, Wayne L. Mattice, Donald McIntyre, Eberhard A. Meinecke, Darrell H. Reneker.  
**ASSOCIATE PROFESSORS:** William J. Brittain, Mark D. Foster, John E. Frederick.  
**ASSISTANT PROFESSOR:** Vassilios Galatsatos.  
**INSTRUCTOR:** Marcia E. Weidknecht.

**Polymer Engineering**

**CHAIR:** Professor James L. White.  
**DISTINGUISHED PROFESSOR:** Joseph Padovan.  
**PROFESSORS:** Chang D. Han, Avraam I. Isayev, Mukerrem Cakmak, Thein Kyu, Arkadii I. Leonov, Rudolph J. Scavusso, Jr.  
**ASSOCIATE PROFESSOR:** Kyonsuku M. Cakmak.

## School of Law

**DEAN:** Professor Richard L. Aynes.

**PROFESSORS:** Lloyd C. Anderson, Merlin G. Briner, Dana F. Castle, Richard L. Grant, Wilson R. Huhn, Isaac C. Hunt, Jr., Donald M. Jenkins, William S. Jordan, III, Margery B. Koosed, Richard J. Kovach, Albert H. Leyerle, Tawia Modibo Ocran, Elizabeth A. Reilly, Paul Richert.

**ASSOCIATE PROFESSORS:** J. Dean Carro, Richard C. Cohen, Howard A. Denemark, Carol A. Olson, William D. Rich, John P. Sahl, Ann E. Woodley.

**ASSISTANT PROFESSORS:** Malina Coleman, Willa E. Gibson.

## Wayne College

**PROFESSORS:** Raymond R. McBeth, Warner D. Mendenhall, Forrest Smith, Edwin Thall.

**ASSOCIATE PROFESSORS:** Thomas E. Andes, R. Diane Arnold, Gary A. Bays, Monica L. Harrison, Louis M. Janelle, Jr., Patsy A. Malavite, Robert L. McEwee, Janet L. Minc, Jane F. Roberts, Emily A. Rock, Kay E. Stephan, Tyrone M. Turning, Timothy R. Vierheller.

**ASSISTANT PROFESSORS:** Karin J. Billions, Robert M. Davey, Daniel C. Deckler, Debra L. Johanyak, Richard M. Maringer, Jerry C. Obiekwe, Paul B. Weinstein, Douglas B. Woods.

**INSTRUCTORS:** Jon A. Loesch, Helen F. Snodgrass, Colleen M. Teague, Joseph M. Wilson.

## University Libraries

**DEAN:** Professor Delmus E. Williams.

**PROFESSORS:** Ruth E. Clinefelter, George V. Hodowanec.

**ASSOCIATE PROFESSORS:** David R. Brink, Diana A. Chlebek, Roger W. Durbin, Julie A. Gammon, John V. Miller, Jr., Nancy L. Stokes.

**ASSISTANT PROFESSORS:** Stephen Aby, Stanley W. Akers, Virginia Berringer, Ann D. Bolek, Onadell J. Bly, Cynthia L. Coccaro, Judith L. Fitzgerald, Nancy L. Hayes, John B. Hill, Jr., Mary S. Konkel, James C. Kuhn, IV, Joseph A. LaRose, Peter Linberger, Joan C. Long, Daniel C. Mack, Phyllis O'Connor, Bennie P. Robinson, Mae N. Schreiber, Joseph E. Straw.

**INSTRUCTOR:** Cherie A Madarash-Hill.

## Reserve Officers' Training Corps

### July 1995

#### Army

**LARRY C. SHUBAT,** *Professor of Military Science* (July 1992) B.A., University of California-Davis; M.S., The Ohio State University; Command and General Staff College, 1989; Major, Corps of Engineers, U.S. Army.

**DAVID A. DECKARD,** *Assistant Professor of Military Science* (July 1993) Major.

**MICHAEL S. FOX,** *Senior Military Science Instructor* (May 1994) Master Sergeant.

**DAVID A. FRISONE,** *Assistant Professor of Military Science* (1994) Captain, Infantry, U.S. Army.

#### Air Force

**GARY J. ARCHAMBAULT,** *Professor of Aerospace Studies* (1993) B.S., University of Wisconsin-Superior; M.S., U.S. International University-San Diego, 1980; Lt. Col., Missile Officer.

**WILLIAM K. BRADEN,** *Air Force ROTC Regional Director of Admissions* (1995) B.S., Pennsylvania State University; M.S., Air Force Institute of Technology, 1987; Major, USAF, Contracting Officer.

**CHRISTOPHER J. KOLLER,** *NCOIC, GMC Records* (October 1990) Sergeant, USAF, Administration.

**TIMOTHY A. REEB,** Sergeant (1995).

**KENNETH A. SEPTARIC,** *Assistant Professor of Aerospace Studies* (1994) B.S., Bowling Green State University; M.A., Troy State University, 1990; Captain, Security Police Officer.

## The Maurice Morton Institute of Polymer Science

**FRANK W. HARRIS,** *Distinguished Professor of Polymer Science; Director of The Maurice Morton Institute of Polymer Science; Research Associate, Institute of Polymer Science* (1983) B.S., University of Missouri; M.S., Ph.D., University of Iowa, 1968.

**WILLIAM J. BRITTAIN,** *Associate Professor of Polymer Science* (August 1990) B.S., University of Northern Colorado; Ph.D., California Institute of Technology, 1982.

**STEPHEN Z. D. CHENG,** *Professor of Polymer Science* (July 1987) B.S., East China Normal University; M.S., East China Institute of Science and Technology; Ph.D. Rensselaer Polytechnic Institute, 1985.

**RONALD K. EBY, SR.,** *Robert C. Musson Professor of Polymer Science* (July 1990) Sc.B., Lafayette College; M.S., Ph.D., Brown University, 1958.

**MARK D. FOSTER,** *Associate Professor of Polymer Science* (November 1990) B.S., Washington University; Ph.D., University of Minnesota at Minneapolis, 1987.

**JOHN E. FREDERICK,** *Associate Professor of Chemistry; Associate Professor of Polymer Science* (October 1966) B.S., Glenville State College; Ph.D., University of Wisconsin, 1964.

**VASSILIOS GALIATSATOS,** *Assistant Professor of Polymer Science* (October 1990) B.S., The University of Thessaloniki; M.S., Ph.D., University of Cincinnati, 1986.

**PURUSHOTTAM DAS GUJRATI,** *Professor of Physics; Professor of Polymer Science* (1983) B.Sc., Banaras Hindu University, India; M.Sc., Indian Institute of Technology, India; M.A., M.Phil., Ph.D., Columbia University, 1978.

**GARY R. HAMED,** *Professor of Polymer Science* (1980) B.S.C.E., M.S.C.E., Cornell University; Ph.D., The University of Akron, 1978.

**H. JAMES HARWOOD,** *Professor of Chemistry; Professor of Polymer Science* (October 1959) B.S., The University of Akron, Ph.D., Yale University, 1956.

**FRANK N. KELLEY,** *Dean of the College of Polymer Science and Polymer Engineering; Professor of Polymer Science* (1978) B.S., M.S., Ph.D., The University of Akron, 1961.

**JOSEPH P. KENNEDY,** *Distinguished Professor of Polymer Science; Distinguished Professor of Chemistry* (April 1970) B.Sc., University of Budapest; M.B.A., Rutgers University; Ph.D., University of Vienna, 1954.

**WAYNE L. MATTICE,** *Alex Schulman Professor of Polymer Science* (July 1986) B.A., Grinnell College; Ph.D., Duke University, 1968.

**DONALD MCINTYRE,** *Professor of Chemistry; Professor of Polymer Science* (1966) A.B., Lafayette College; Ph.D., Cornell University, 1954.

**EBERHARD A. MEINECKE,** *Professor of Mechanical Engineering; Professor of Polymer Science* (October 1963) D. Eng., Braunschweig Institute of Technology (Germany), 1960.

**RODERIC P. QUIRK,** *Professor of Polymer Science; Department Chair of Polymer Science* (October 1983) B.S., Rensselaer Polytechnic Institute; M.S., Ph.D., University of Illinois, 1967.

**DARRELL H. RENEKER,** *Professor of Polymer Science* (1989) B.Sc., Iowa State University; M.Sc., Ph.D., University of Chicago, 1959.

**ERNST D. VON MEERWALL,** *Distinguished Professor of Physics; Distinguished Professor of Chemistry; Faculty Research Associate, IPS* (1971) B.S., M.S., Northern Illinois University; Ph.D., Northwestern University, 1970.

**MARCIA E. WEIDKNECHT,** *Instructor in Polymer Science* (August 1989) B.S., University of New Hampshire, 1971.

## Institute of Biomedical Engineering Research

**STANLEY E. RITGERS,** *Professor of Biomedical Engineering; Director of the Institute for Biomedical Engineering Research* (1987) B.S., State University of New York at Buffalo; M.S., Ph.D., The Ohio State University, 1978.

**GEORGE C. GIAKOS,** *Professor of Biomedical Engineering* (1994) B.A., University of Turin; M.S., University of Edinburgh; M.S., Ohio University; Ph.D., Marquette University, 1991.

**GLEN O. NJUS,** *Research Associate Professor in Institute for Biomedical Engineering Research* (November 1986) B.S., M.S., Ph.D., University of Iowa, 1985.

**NARENDER P. REDDY,** *Professor of Biomedical Engineering* (March 1981) B.E., Osmania University; M.S., University of Mississippi; Ph.D., Texas A&M University, 1974.

**DONNA B. RICHARDSON,** *Assistant Professor of Biomedical Engineering* (1994) B.S., University of Iowa; M.S., Ph.D., Duke University, 1991.

**DANIEL B. SHEFFER,** *Associate Professor of Biology; Associate Professor of Biomedical Engineering; Department Chair of Biomedical Engineering; Director, Biostereometrics Laboratory* (July 1980) B.S., M.Ed., Northwestern State College; Ph.D., Texas A&M University, 1976.

**BRUCE C. TAYLOR,** *Associate Professor of Biomedical Engineering; Associate Professor of Electrical Engineering* (1988) B.A., Hiram College; M.A., Ph.D., Kent State University, 1971.

**WILLIAM D. TIMMONS,** *Assistant Professor of Biomedical Engineering* (1993) B.S., M.S., Ph.D., Case Western Reserve University, 1992.

**MARY C. VERSTRAETE,** *Associate Professor of Biomedical Engineering* (1988) B.S., M.S., Ph.D., Michigan State University, 1988.

## Institute of Polymer Engineering

**JAMES L. WHITE,** *Professor of Polymer Engineering; Department Chair of Polymer Engineering; Director of the Institute of Polymer Engineering* (July 1983) B.S.Ch.E., Polytechnic Institute of Brooklyn; M.S.Ch.E., Ph.D., University of Delaware, 1965.

**KYONSUKU MIN-CAKMAK,** *Associate Professor of Polymer Engineering* (August 1983) B.Eng., M.Eng., Kyoto Institute of Technology; Ph.D., University of Tennessee, 1984.

**MUKERREM CAKMAK,** *Professor of Polymer Engineering* (August 1983) B.S., Technical University of Istanbul; M.S., Ph.D., University of Tennessee, 1984.

**CHANG DAE HAN,** *Benjamin Franklin Goodrich Endowed Professor of Polymer Engineering* (January 1993) B.S., Seoul National University; M.S., Sc.D., Massachusetts Institute of Technology; M.S., Newark College of Engineering; M.S., New York University, 1971.

**AVRAAM I. ISAYEV,** *Professor of Polymer Engineering* (1983) M.Sc., Azerbaijan Institute of Oil and Chemistry; M.Sc., Moscow Institute of Electronic Machine Building; Ph.D., USSR Academy of Sciences, 1970.

**THEIN KYU,** *Professor of Polymer Engineering* (1983) B.Eng., Kyoto Institute of Technology; M.Eng., D.Eng., Kyoto University, 1980.

**ARKADII I. LEONOV,** *Professor of Polymer Engineering* (1988) B.S., Moscow Institute of Chemical Engineering; M.S., Moscow State University; Ph.D., USSR Academy of Sciences; Ph.D., Karpov Physico-Chemical Research Institute, Moscow USSR, 1969.

**RUDOLPH J. SCAVUZZO, JR.,** *Associate Dean of the College of Polymer Science and Polymer Engineering; Professor of Polymer Engineering; Professor of Mechanical Engineering* (1973) B.S.M.E., Lehigh University; M.S.M.E., Ph.D., University of Pittsburgh, 1962; P.E., Ohio.

## Presidents

\*Deceased.

### Buchtel College

**S. H. McCOLLESTER\***, 1872-1878, D.D., Litt. D.  
**E. L. REXFORD\***, 1878-1880, D.D.  
**ORELLO CONE\***, 1880-1896, D.D.  
**CHARLES M. KNIGHT\***, 1896-1897, D.Sc. (ad interim)  
**IRA A. PRIEST\***, 1897-1901, D.D.  
**A. B. CHURCH\***, 1901-1912, D.D., LL.D.  
**PARKE R. KOLBE\***, 1913, Ph.D., LL.D.

### The University of Akron

**PARKE R. KOLBE\***, 1913-1925, Ph.D., LL.D.  
**GEORGE F. ZOOK\***, 1925-1933, Ph.D., LL.D.  
**HEZZLETON E. SIMMONS\***, 1933-1951, M.S., D.Sc. LL.D.  
**NORMAN P. AUBURN**, 1951-1971, B.A., D.Sc., Litt.D., L.H.D., LL.D., D.C.L.  
**D. J. GUZZETTA**, 1971-1984, Ed.D., LL.D., D.S.Sc., L.H.D.  
**WILLIAM V. MUSE**, 1984-1992, B.S., M.B.A., Ph.D.  
**MARION A. RUEBEL**, 1992, B.A., M.A., Ph.D., (acting)  
**PEGGY GORDON ELLIOTT**, 1992-, B.A., M.S., Ed.D.

## Deans of the Colleges of The University of Akron

\*Deceased.

### Buchtel College of Arts and Sciences

**ALBERT I. SPANTON\***, 1913-1938, M.A., Litt.D.  
**CHARLES BULGER\***, 1938-1948, Ph.D., Litt.D.  
**ERNEST H. CHERRINGTON, JR.**, 1948-1960, Ph.D.  
**THOMAS SUMNER\***, 1960-1962, Ph.D.  
**GEORGE W. KNEPPER**, 1962-1967, Ph.D.  
**DON A. KEISTER**, 1967-1969, Ph.D.  
**JOHN BACHMANN\***, 1969-1970, Ph.D. (acting)  
**ROBERT A. OETJEN**, 1970-1977, Ph.D.  
**CLAIBOURNE E. GRIFFIN**, 1977-1993, Ph.D.  
**RANDY MOORE**, 1993-, Ph.D.

### College of Engineering

**FREDERIC E. AYER\***, 1914-1946, C.E., D.Eng.  
**R. D. LANDON**, 1946-1963, C.E., M.S.  
**W. M. PETRY\***, 1963-1964, M.S.M.E. (acting)  
**MICHAEL J. RZASA\***, 1964-1970, Ph.D.  
**COLEMAN J. MAJOR**, 1970-1979, Ph.D.  
**JOSEPH EDMINISTER**, 1980-1981, J.D. (acting)  
**LOUIS A. HILL, JR.**, 1981-1988, Ph.D.  
**GLENN A. ATWOOD**, 1988-1989, Ph.D. (acting)  
**NICHOLAS D. SYLVESTER**, 1989-1994, Ph.D.  
**CHIOU S. CHEN**, 1994-1995, Ph.D. (interim)

### College of Education

**W. J. BANKES\***, 1921-1931, M.A.  
**ALBERT I. SPANTON\***, 1931-1933, M.A., Litt.D. (acting)  
**HOWARD R. EVANS\***, 1933-1942, Ph.D.  
**HJALMER W. DISTAD\***, 1942-1944, Ph.D. (acting)  
**HOWARD R. EVANS\***, 1944-1958, Ph.D.  
**D. J. GUZZETTA**, 1958-1959, Ed.D., LL.D., D.S.Sc., L.H.D. (acting)  
**CHESTER T. McNERNEY**, 1959-1966, Ph.D., LL.D.  
**H. KENNETH BARKER**, 1966-1985, Ph.D.  
**JOHN S. WATT**, 1985-1986, Ph.D. (acting)  
**CONSTANCE COOPER**, 1986-1988, Ed.D.  
**JOHN S. WATT**, 1988-1989, Ph.D. (acting)  
**WILLIAM E. KLINGELE**, 1989-, Ed.D.

### College of Business Administration

**WARREN W. LEIGH\***, 1953-1962, Ph.D.  
**RICHARD C. REIDENBACH**, 1962-1967, Ph.D.  
**ARTHUR K. BRINTALL**, 1967-1968, Ph.D. (acting)  
**WILBUR EARLE BENSON\***, 1968-1970, Ph.D.  
**JAMES W. DUNLAP**, 1970-1989, Ph.D.  
**RUSSELL J. PETERSEN**, 1989-1994, Ph.D.  
**JAMES INMAN**, 1994-1995, LL.M. (interim)  
**STEPHEN F. HALLAM**, 1995-, Ph.D.

### School of Law

**STANLEY A. SAMAD**, 1959-1979, J.S.D.  
**ALBERT S. RAKAS\***, 1979-1981, J.D. (interim)  
**DONALD M. JENKINS**, 1981-1987, LL.M.  
**ISAAC C. HUNT, JR.**, 1987-1995, LL.B.  
**RICHARD AYNES**, 1995-, J.D.

### Graduate School

**CHARLES BULGER\***, 1933-1951, Ph.D., Litt.D. (Dean of Graduate Work)  
**ERNEST H. CHERRINGTON, JR.**, 1955-1960, Ph.D. (Director of Graduate Studies)  
**ERNEST H. CHERRINGTON, JR.**, 1960-1967, Ph.D. (Dean of the Graduate Division)  
**ARTHUR K. BRINTALL**, 1967-1968, Ph.D. (Dean of Graduate Studies and Research)  
**EDWIN L. LIVELY**, 1968-1974, Ph.D. (Dean of Graduate Studies and Research)  
**CLAIBOURNE E. GRIFFIN**, 1974-1977, Ph.D. (Dean of Graduate Studies and Research)  
**JOSEPH M. WALTON**, 1977-1978, Ph.D. (Associate Dean of Graduate Studies and Research)  
**ALAN N. GENT**, 1978-1986, Ph.D. (Dean of Graduate Studies and Research)  
**JOSEPH M. WALTON**, 1986-1989, Ph.D. (Acting Dean of Graduate Studies and Research)  
**PATRICIA L. CARRELL**, 1989-1993, Ph.D. (Dean of the Graduate School)  
**CHARLES M. DYE**, 1993-, Ph.D. (Interim Dean of the Graduate School)

### University College (formerly General College)

**D. J. GUZZETTA**, 1959-1962, Ed.D., LL.D., D.S.Sc., L.H.D.  
**THOMAS SUMNER\***, 1962-1977, Ph.D.  
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### Evening College

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### Community and Technical College

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### College of Fine and Applied Arts

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## College of Nursing

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 ELIZABETH J. MARTIN, 1988-1992, Ph.D.  
 V. RUTH GRAY, 1992-, Ed.D.

## Wayne College

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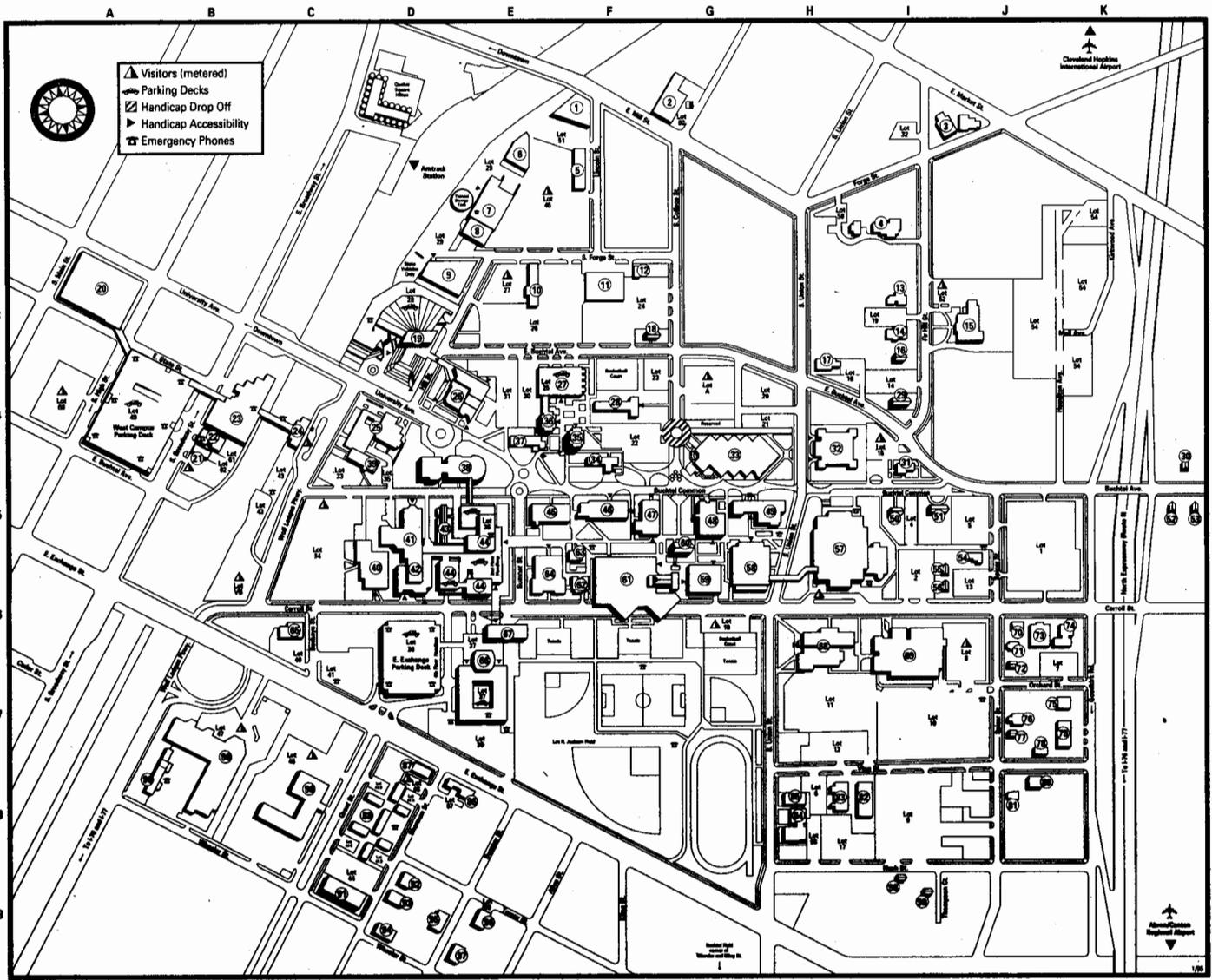
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# THE UNIVERSITY OF AKRON



LOCATOR	BLDG NO.	LOCATOR	BLDG NO.
<b>Academic Buildings</b>		<b>Residence Halls, Fraternities and Sororities</b>	
E5	44 Auburn Science and Engineering Center	J8	81 Alpha Delta Pi Sorority
G1	2 Akron Polymer Training Center	J6	70 Alpha Gamma Delta Sorority
E5	45 Ayer Hall	J6	71 Alpha Kappa Alpha Sorority
I1	3 Ballet Center	F3	18 Alpha Phi Sorority
G5	33 Bierce Library	I6	55 Bartrick Hall
G6	59 Carroll Hall	K7	79 Berns Residence Hall*
B4	23 College of Business Administration Building	H8	84 Brown Street Residence Hall
F5	46 Crouse Hall	F4	35 Bulger Residence Hall
B8	90 Folk Hall	J7	77 Chi Omega Sorority
F3	12 Forge Building	D9	92 Concord Residence Hall*
D6	42 Gladwin Hall	I5	51 Delta Gamma Sorority
D4	28 Guzzetta Hall	K5	30 Delta Tau Delta Fraternity
D5	41 Knight Chemical Laboratory	D9	94 Ellis House*
H5	49 Kolbe Hall	C8	89 Gallucci Residence Hall (Honors Program)
G5	48 Leigh Hall	E9	96 Garson Residence Hall
D4	25 McDowell Law Center	K7	75 Glenville Residence Hall*
H4	32 Olin Hall	C9	91 Grant Residence Center High-rise
E2	7 Olson Research Center	H8	83 Joey Residence Hall*
A3	20 The Polsky Building	D9	97 Judson House*
E5	38 Polymer Science Building	J7	72 Kappa Kappa Gamma Sorority
E6	67 Schrank Hall North	I3	13 Lambda Chi Alpha Fraternity
E7	66 Schrank Hall South	F4	28 Orr Residence Hall
E6	64 Simmons Hall	J5	54 Phi Delta Theta Fraternity
C4	39 West Hall	J7	76 Phi Gamma Delta Fraternity
D5	43 Whitby Hall	K5	52 Phi Kappa Psi Fraternity
F5	47 Zook Hall	I5	50 Phi Kappa Tau Fraternity
<b>Administrative Buildings</b>		K6	74 Phi Sigma Kappa Fraternity
I5	31 Admissions Building	J8	80 Pi Kappa Epsilon (Lone Star) Fraternity
F1	1 Bel-Aire Building	F5	34 Ritchie Residence Hall
F6	62 Boiler and Heating Plant	D9	93 Sherman Residence Hall*
B4	21 285 South Broadway Street Building	I9	99 Sigma Alpha Epsilon Fraternity
B4	22 277 South Broadway Street Building	J6	73 Sigma Nu Fraternity
G5	60 Buchtel Hall	I9	98 Sigma Pi Fraternity
C5	65 Carroll Street Substation	I6	56 Sigma Tau Gamma Fraternity
F3	11 Central Services Building	E4	37 Sisler/McFawn Residence Hall
D6	40 Computer Center	E4	36 Spanton Residence Hall
D7	87 222 Exchange Building	D9	95 Sumner Residence Hall*
E8	86 232 Exchange Building	I3	16 Tau Kappa Epsilon Fraternity
I4	29 138 Fir Hill Street	J7	78 Theta Chi Fraternity
E2	8 Forge Street Substation	D8	88 Town Houses
E1	6 Grounds Maintenance	K5	53 Triangle Fraternity
F2	5 100 Lincoln Street Building	H8	85 Wallaby Residence Hall*
E3	10 North Hall	H8	82 Wallaroo Residence Hall*
D3	9 Physical Facilities Operations Center	<i>* Privately owned residence halls</i>	
H6	68 Spicer Hall		
H4	17 143 Union Street Building		
<b>Multi-purpose Buildings</b>			
C4	24 Buckingham Building		
I3	14 Center for Child Development		
F5	63 Computer Store		
F6	61 Gardner Student Center		
F4	27 Health Services		
I2	4 Hower House		
J3	15 Martin University Center		
G6	58 Memorial Hall		
I7	89 Ocasek Natatorium		
H6	57 James A. Rhodes Health and Physical Education Building		
F4	27 Robertson Dining Hall		
D3	19 E.J. Thomas Performing Arts Hall		